

# TY: Toy Design

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## **TY 101 — Introduction to Toy Design**

1.5 credits; 3 lab hours

This introductory course is designed for students interested in exploring the area of toy design. Students learn the design and invention process, as well as effective ways to visually communicate concepts for toy products. Some drawing skills are needed. (G6: Arts).

## **TY 311 — Toy Design I**

1.5 credits; 3 lab hours

Nurtures and develops creativity as it is applied to toy design. Various techniques for the design of toys are explored and used in practical application.

Co-requisite(s): TY 351.

## **TY 313 — Soft Toy and Doll Design**

3 credits; 6 lab hours

Designing plush toys and dolls from research and development, concept creation, sketching, and patternmaking, to prototype construction and presentation. The study of materials, manufacturing techniques, packaging, and industry requirements, as related to toy design, is stressed.

Prerequisite(s): TY 326.

## **TY 314 — Professional Practices in Toy Design**

1.5 credits; 3 lab hours

This course combines studio work, discussion of trends, consultation with industry professionals, and presentation practice in order to strengthen students' design and marketing skills and develop portfolios to address the needs of the job market. Work focuses on specific design categories according to individual needs.

Prerequisite(s): TY 311, TY 321, TY 322, TY 323, TY 351, TY 362, and SS 232.

## **TY 321 — Drawing for Toy Design**

1.5 credits; 3 lab hours

Development of drawing and rendering skills as the primary tools for conceptual and visual presentation of three-dimensional toy designs.

Co-requisite(s): TY 311 and TY 322.

## **TY 322 — Marker Rendering**

1.5 credits; 3 lab hours

Develops the professional techniques of executing toy design renderings for presentation.

Co-requisite(s): TY 311 and TY 321.

## **TY 323 — Basic Drafting for Product Design**

1.5 credits; 3 lab hours

Establishes basic understanding of mechanical drawing fundamentals and its application to toy design.

Co-requisite(s): TY 351.

## **TY 325 — Computer-Aided Advanced Drafting for Product Design**

1.5 credits; 3 lab hours

Students develop advanced techniques by learning to use the computer as a design and drafting tool. Through demonstrations and in-class assignments, they integrate drafting knowledge with working in a digital environment.

Prerequisite(s): TY 323.

### **TY 326 — Toy Design I and Product Rendering**

3 credits; 6 lab hours

This introductory course explores the design of toys in multiple categories. Students' broaden their ability to visually communicate age-appropriate play patterns, safety requirements, and category expectations. From researching to hand-rendering, they develop original, professional quality toy concepts that use various tools and techniques. Co-Requisite(s): TY 352 & TY 327.

### **TY 327 — Drafting and Technical Drawing**

3 credits; 6 lab hours

This course covers a wide range of industry-relevant drafting and drawing techniques. Students depict objects with a high degree of precision and realism to communicate clearly as design professionals. Industry standard tools for 2D/3D environments are applied to the principles of orthographic projection, isometrics, perspective, scale, light and shadow. Co-Requisite(s): TY 326 & TY 352.

### **TY 331 — Modelmaking I**

2 credits; 4 lab hours

Introduces the process of translating two-dimensional renderings into finished models in clay, wood, styrofoam, or thermoplastics. Vacuum-forming, fabricating, machining, and finishing techniques are presented.

Prerequisite(s): TY 311 and TY 323.

### **TY 332 — Model Making and 3D Prototyping**

3.5 credits; 7 lab hours

This introductory course teaches practical skills and methodologies for translating 2D renderings into finished 3D prototypes. Students utilize digital and physical techniques to create 3D virtual models and actual physical prototypes with functioning mechanisms. Industry concerns such as molding parameters, manufacturing material properties, and child safety are also addressed.

Prerequisite(s): TY 326 & TY 327.

### **TY 342 — Computer Graphics in Toy Design**

2 credits; 1 lecture and 2 lab hours

Students explore the computer as a tool for the presentation, refinement, and most importantly, the stimulation of creative design ideas. The fundamental principles of the two-dimensional bitmap and vector-based graphics using Adobe Photoshop and Illustrator on the Macintosh computer system are introduced.

Prerequisite(s): TY 326.

### **TY 351 — Product Materials and Safety Considerations**

2 credits; 2 lecture hours

Study of the materials, machinery, and methods used to manufacture plastic and nonplastic toys that meet specific design requirements, safety standards, and durability tests cost-effectively.

Co-requisite(s): TY 311 and TY 323.

### **TY 352 — The Toy Industry: Methods and Materials**

3 credits; 2 lecture and 2 lab hours

Students engage in an analysis of various processes within the industry. They examine the properties of plastics and other materials; machinery; methods used in molding, assembly and packaging; and interactive electronics. Industry guests provide an overview of the scope of the trade including design categories, marketing, and safety issues. Co-Requisite(s): TY 326 & TY 327.

### **TY 362 — The Toy Industry: An Overview**

1 credit; 2 lab hours

Introduces scope of the toy industry through its history and development. Provides understanding of the industry's organizational structure, toy categories, marketing techniques, and specific nomenclature. Presentations are made by major toy company executives and retailers.

Co-requisite(s): TY 311.

### **TY 411 — Toy Design II and Product Update**

2 credits; 4 lab hours

Advanced methods for generation of toy design ideas. Emphasizes areas of new toy creation, line extension, and licensing. (G6: Arts)

Prerequisite(s): TY 332.

### **TY 414 — Games**

1.5 credits; 3 lab hours

Game theory and logic are studied and applied to the design of games with special regard to such factors as age, play pattern, three-dimensional skills, action, strategy, and psychology. Emphasizes the successful execution and presentation of game concepts.

Prerequisite(s): TY 411 and TY 421.

### **TY 416 — Hard Toy: Design**

1.5 credits; 3 lab hours

The design component of creating hard toys, this course offers students the experience of designing toys from among the major toy categories. Drawing and presentation are stressed as an integral part of the product development process, underscoring the importance of the relationship between form and function. (G6: Arts)

Prerequisite(s): TY 311, TY 325, TY 331 and TY 351

Co-requisite(s): TY 417.

### **TY 417 — Hard Toy: Engineering**

1.5 credits; 3 lab hours

The engineering component of creating hard toys, this course offers students the experience of designing toys from among the major toy categories. The technical aspects of toy product development are stressed, helping students give form to their concepts while meeting standard manufacturing criteria.

Prerequisite(s): TY 311, TY 325, TY 331, and TY 351

Co-requisite(s): TY 416 and TY 431.

### **TY 418 — Licensed Product Design**

1.5 credits; 3 lab hours

Providing a link between the creative ideas generated by students and the realities of the toy industry, this course introduces the licensed product category. Students build upon character ideas developed in previous courses to reconceptualize them in the context of licensed products.

Prerequisite(s): TY 311, TY 313, TY 325, TY 331, TY 342, and MK 301.

### **TY 421 — Advanced Hard Toy: Design & Engineering**

5 credits; 10 lab hours

Students design, engineer and fabricate fully functioning 3-dimensional plastic toy prototypes including functioning mechanisms. Focusing on product with highly demonstratable features, students create toys from among the major categories, considering product development issues, finishing techniques and presentation. They complete digital representation including 3D assemblies and photo-realistic renderings and engineering drawings.

Prerequisite(s): TY 332 & TY 352.

### **TY 431 — Modelmaking II**

2 credits; 4 lab hours

Advanced study of toy modelmaking techniques and equipment. Working from individual concept sketches, students refine modelmaking skills by producing their own finished prototypes.

Prerequisite(s): TY 331 and TY 351

Co-requisite(s): TY 416 and TY 417.

### **TY 442 — Advanced Computer Graphics in Toy Design**

2 credits; 1 lecture and 2 lab hours

Offered in conjunction with GD 407, this course introduces the principles of three-dimensional computer graphics and digital book design. Students build a three-dimensional model based on their soft toy designs and the character in preparation for inclusion in their digital books.

Prerequisite(s): TY 313, TY 332 and TY 342.

### **TY 444 — Photorealistic Product Communication**

2 credits; 1 lecture and 2 lab hours

Students develop the ability to transform hand-drawn images into a near-photorealistic digital representation of product using tools in the latest version of Adobe Creative Suite. They gain a full understanding of how to represent material, texture, light/shadow, and reflection and the skills necessary to represent these qualities in their designs.

Prerequisite(s): TY 342.

### **TY 461 — Business Practices for the Toy Industry**

2 credits; 2 lecture hours

Addresses the legal, ethical, and practical considerations involved in selling or licensing a toy design. Topics include patent, trademark, and copyright law; disclosure and licensing agreements; corporate and agency structure.

Prerequisite(s): TY 352 and TY 411.

### **TY 462 — Professional Portfolio Development**

2 credits; 4 lab hours

Students analyze, position, and develop their portfolios for placement in an appropriate venue. A combination of studio work, marketing trend analysis, consultation with industry professionals, and presentation practice guides students toward a focused goal.

Prerequisite(s): TY 442

Co-requisite(s): TY 493.

### **TY 463 — Storybook Design and Licensed Product**

3 credits; 6 lab hours

Students apply the conceptual elements of the graphic design process to write, design and illustrate a children's book about the promotional soft toy character designed in TY 313. They create licensed product designs as an integral part of the storybook to extend the life of the original toy.

Prerequisite(s): TY 313, TY 342, MK 301, & TY 332.

### **TY 467 — Professional Portfolio**

4.5 credits; 9 lab hours

Students analyze, position, and develop their portfolios to align with their chosen disciplines. This course combines studio work, discussion of marketing trends, and presentation practice. Students create concepts guided by their goals, developing their ability to transform hand-drawn images into near-photorealistic digital representations of product in 2D and 3D environments.

Prerequisite(s): TY 342, TY 411, TY 421, TY 442, and SS 232.

### **TY 491 — Summer Internship: Toy Design**

4 credits

A summer internship in industry, scheduled individually for a minimum of 168 hours at the worksite and 12 hours on campus. Includes a pre- and post-internship seminar. Completion of a daily journal, a written and oral report on the experience, and a portfolio of work is required. Applications must be submitted in spring semester prior to acceptance into the program.

Prerequisite(s): TY 313 and TY 332.

**TY 493 — Senior Project: Design**

1.5 credits; 3 lab hours

The design component of the senior project, this course offers senior students the opportunity to individually design and present products from two of the major toy categories. Demands and restrictions of the toy industry are simulated by industry representatives who present students with actual market criteria.

Prerequisite(s): TY 411, TY 416, TY 417, and TY 431.