

Toy Design

Sophomore Year		Fall	Spring	Degree Requirements
TOYD200/201	Toy Design I/II	3.0	3.0	
TOYD220/221	Drawing I/II	2.0	2.0	
TOYD230	2D Visualization	2.0	—	
TOYD231	3D Visualization I	—	2.0	
TOYD240/241	Model Making I/II	2.0	2.0	
TOYD250/251	Methods & Materials of Production I/II	2.0	2.0	
TOYD261	Conceptual Problem Solving & Brainstorming	—	2.0	
SSCI211	Child Psychology	3.0	—	
ENGL202	Sophomore English	3.0	—	
ILML 200	Integrated Learning Lecture	—	3.0	
Total Credits per Semester		17.0	16.0	
Junior Year		Fall	Spring	
TOYD300/301	Toy Design III/IV	4.0	4.0	
TOYD320/321	Drawing III/IV	2.0	2.0	
TOYD330/331	3D Visualization II/III	2.0	2.0	
TOYD340	Model Making III	3.0	—	
**TOYD455	Portfolio Development	—	2.0	
*ILMS300	Integrated Learning Studio	2.0	—	
MATH 136	Math for Artists and Designers	—	3.0	
AHCS236	History of Toys	—	3.0	
AHCS220	Contemporary Perspectives in Art and Design	3.0	—	
Total Credits per Semester		16.0	16.0	
Senior Year		Fall	Spring	
TOYD400/401	Toy Design V/VI	4.0	4.0	
***TOYD415	Career Development	2.0		
TOYD420/421	Drawing V/VI	2.0	2.0	
TOYD425	Games and Game Theory	2.0	—	
TOYD430	Package Design	—	2.0	
TOYD450	Toy Industry Practices	2.0	—	
LIBS454	Business Practices	—	2.0	
NSCI308	Juvenile Anatomy and Ergonomics	3.0	—	
	Advanced Topics in English or	—	3.0	
LIBS410/ENGL400	Liberal Studies Elective			
AHCS 310	Art History Elective	3.0	—	
LIBS 440	Senior Liberal Studies Capstone	—	3.0	
Total Credits per Semester		18.0	16.0	

*These courses may be taken either in the fall or the spring semester

**Note: TOYD455 Portfolio Development: Though the coursework portion of this class is offered during the spring semester, students are encouraged to participate in an industry internship during the summer between sophomore and junior years.

***Note: TOYD415, Career Development: Though the coursework portion of this class is offered during the fall semester, students are encouraged to participate in an industry internship during the summer between junior and senior years.

Important note: All students must pass with a "C" grade or better in Toy Design studio and Drawing classes at all levels in order to continue with the Toy Design program. Participation in an industry-sponsored class is considered an earned privilege, not a right; therefore students are required to maintain a "C+" g.p.a. in Toy Design studio classes throughout the design process in order to participate in an Industry sponsored class if the opportunity exists.

Toy Design

Course Descriptions

Toy Design I/II

TOYD200/201 3 credits

In these courses, students develop an understanding of the creative process of toy design. Emphasis is placed on developing toys which engage children in what is referred to in the toy industry as “play patterns.” Students apply skills in drawing, model making, and fabrication to create original toys which engage children in imaginative play and shape developmental skills and decision-making, socialization and creativity. The students learn to conduct market research and analysis to insure that their designs are appropriate for the category of toys they are designing. Using various fabrication techniques, students will translate their idea into 3D models, and present the final products to faculty and visiting toy industry professionals.

Lab Fee - Toy Design I/II - \$50.00

Toy Design I is prerequisite for Toy Design II

Drawing I

TOYD220 2 credits

The purpose of this class is for students to become fully articulate in a new drawing language called Visual Communication. To communicate effectively, a designer needs to have at their disposal a broad range of drawing skills. Students spend the semester becoming familiar with the principals of perspective and more importantly, they learn the useful particulars and shortcuts pertaining to sketching.

Drawing II

TOYD221 2 credits

This second semester course is an introduction to the theory and practice of sketching, drawing, and rendering techniques as applied to toy product. Focus is on rapid visual sketching as well as marker rendering, which enable the designer to convey information about surface characteristics such as color, texture and material.

Prerequisite: ToyD 220 Drawing I

2D Visualization

TOYD230 2 credits

In this course students acquire the skills necessary to take a concept from a rough sketch to a refined set of technical illustrations. Students will learn to produce illustrations accurately that will convey their design intent and serve as a blueprint when creating a prototype model. The students are introduced to the basic drawing tools in Adobe Illustrator. The skills learned during this course will continue to be utilized throughout the remainder of the Toy Design studio courses.

Prerequisite: TOYD221 Drawing II

3D Visualization I

TOYD231 2 credits

This class examines the computer as a means to construct and render an idea via 3D-modeling, and then to output that information for computer aided rapid prototyping. It introduces Computer Aided Design (CAD) programs as toy design tools. Students start with Rhino, a 3D-modeling program that emphasizes the 3D construction and surface rendering of ideas and output to the rapid prototyping machine.

Prerequisite: ToyD 230 2D Visualization

Model Making I

TOYD240 2 credits

This course introduces students to plastic fabrication and proto-typing concepts through the use of various methods.

Lab Fee - \$245.00

Open to Toy Design Majors Only

Model Making II

TOYD241 2 credits

This course teaches the basics of sculpting licensed characters from 2-D turnaround drawings. Students then learn to make molds of the sculpted figures, to cast them in resin, and then to paint the cast figures.

Lab Fee - \$100.00

Prerequisite: ToyD 240 Model Making I


Open to Toy Design Majors Only

Methods and Materials of Production I

TOYD250 2 credits

Materials used for manufacturing within the industry are important because they determine the durability and safety of toys, toy use by consumers, and the methods and costs of production. Each of these issues must be considered in order to successfully design and market a toy. This course focuses on different manufacturing processes as well as the understanding and use of materials used in toy design. Of special interest are issues regarding sustainability.

Methods and Materials of Production II

TOYD251 2 credits 

This second-semester course explores more advanced manufacturing processes and materials. Discussion focuses on the fundamentals of plastic components and on design, exploring the possibilities and limitations associated with plastic toy components. Of special interest are issues regarding sustainability.

Prerequisite: ToyD 250 Methods and Materials I

Conceptual Problem Solving and Brainstorming

TOYD261 2 credits

Brainstorming is an essential part of the toy design process; therefore, this class emphasizes creativity through brainstorming techniques. Additional focus is on cobbling up quick toy ideas, given a specific design category.

Prerequisite: ToyD 200 Toy Design I

Toy Design III/IV

TOYD300/301 4 credits

In these courses, students will expand on and apply principles they have learned in Toy Design I and II to create original toys which can be expanded to become a toy brand with line extensions. Students will utilize analog and digital drawing skills, technology including digital design software for rapid proto-typing, and explore methods of fabrication using a variety of materials. Students will learn the most effective methods of presenting their toy concepts visually, demonstrating new features digitally when it is the most effective way of communicating play patterns and function. Corporate sponsored projects may occur during either semester, but regardless, critiques will include visiting toy industry professionals.

Prerequisite: ToyD 200/201 Toy Design I/II

Drawing III

TOYD320 2 credits

Students focus on the full understanding of material indication. Topics covered include concept sketching, composition, layout, perspective drawing, using sketching as a design tool, and understanding and rendering reflective forms.

Prerequisite: ToyD 221 Drawing II

Drawing IV

TOYD321 2 credits

This course introduces the computer as a digital tool, building upon sketching and rendering techniques learned in previous drawing classes.

Prerequisite: ToyD 320 Drawing III

3D Visualization II

TOYD330 2 credits

A more advanced version of 3D Visualization I, this course continues the use of Rhino, the 3D modeling program used in the construction of prototyping models. By using Computer Aided Design (CAD) programs (the same as in the toy industry) students learn advanced modeling and prototyping techniques. Students will be introduced to Studio MAX for several styles of rendering and basic animation skills. This course combines instruction on the computer with guidance in the standard requirements for the production of 3D models through output to the rapid proto-typing machine.

Prerequisite: ToyD 231 3D Visualization I

3D Visualization III

TOYD331 2 credits

This is an advanced computer lab course that allows students to continue to develop their 3D modeling skills with Rhino and learn more advanced modeling techniques. Students will continue to develop their Studio MAX skills with more advanced rendering and animation skills. The course will introduce Adobe After Effects as a means to create more compelling digital video presentations with animation, titles, sound effects, and transitions. Content focuses on the advanced use of computer programs to output models for on-going projects. Students apply acquired learning to improve toy design projects for use in their portfolios.

Prerequisite: ToyD 330 3D Visualization II

Toy Design

Course Descriptions

Model Making III

TOYD340 3 credits

This course focuses on advanced model making skills and techniques involving the lathe and milling machine with an emphasis on the issues and problems related to the projects developed in Toy Design III. Also included is an emphasis on advanced sculpting, molding, casting techniques, and building articulated armatures for action figures. *Lab fee - \$150.00*

Prerequisite: ToyD 241 Model Making II

Portfolio Development

TOYD455 2 credits

This course concentrates on the organization and presentation of the student's portfolio. Additional attention is given to interviewing skills and techniques. Students will also develop a promo sheet and resume. All work will be presented in both analog and digital formats.

Prerequisite: ToyD 201 Toy Design II

Toy Design V/VI

TOYD400/401 4 credits

These courses are advanced level courses in which students continue in their development of conceptual, technical, and creative skills and methodologies relating to toy design. Emphasis is placed on identifying future trends and technology and integrating them into the toy design process. Students will have been exposed to the unique and different categories of toys and children's products and how those products are part of larger brands and entertainment properties. Corporate-sponsored projects may occur during either semester, but regardless, critiques will include visiting toy industry professionals. The students may have had the opportunity to participate in summer internships where they gained "real world" experience, and will be able to apply that learning as well as their classroom experience to design and prepare their senior show. It will showcase their talents, and is held at the end of the spring semester.

Prerequisite: ToyD 300/301 Toy Design III/IV

Career Development

TOYD415 2 credits

This course will cover interviewing skills, research and targeting potential job prospects, and preparation of oral and written communications.

Prerequisite: Toy D 455 Portfolio Development

Drawing V

TOYD420 2 credits

Understanding of form and material indication from the previous semester is now executed in full color. The course starts with the application of color to backgrounds and other simple elements used in concept sketching. By the end of the course, students are rendering at photo-realistic levels using the computer as a digital tool. Students learn how to render a toy of their own design in full color at a professional level.

Prerequisite: ToyD 321 Drawing IV

Drawing VI

TOYD421 2 credits

This is an advanced computer lab course that allows students to apply their knowledge from prior drawing classes to on-going projects in an effort to build their portfolios.

Prerequisite ToyD 420 Drawing V

Games and Game Theory

TOYD425 2 credits

This course focuses on game theory from a behavioral science perspective, and applies that perspective to an understanding of a variety of games. The course includes a historical and cross-cultural emphasis. Students create an original game.

Prerequisite: ToyD 301 Toy Design IV

Package Design

TOYD430 2 credits

Package design focuses on creating three dimensional solutions to solve a variety of packaging and retail problems. In addition to marketing issues, package design addresses a variety of storage and safety concerns. The students address these issues as well as the graphic treatment of the package. Of special interest are issues regarding sustainability.

Prerequisite ToyD 400 Toy Design V

Toy Industry Practices

TOYD450 2 credits

This course provides an introduction to marketing and product management within the toy industry. Discussion focuses on the four guiding principals of brand management: product, packaging, placement, and promotion. Various topics include consumer behavior, market research, product design, pricing, retail sales, merchandising, advertising, and promotions.

Prerequisite: ToyD400 Toy Design V

Independent Study

TOYD999 1-6 credits

Independent studies provide an opportunity for students to work closely and collaboratively with faculty on assignments that extend the scope of their current interests, or expand their expertise. Applications for independent study projects are reviewed and approved by the department chair based on proposals submitted by interested students.

Special Topics: 3D Visualization IV

TOYD460 2 credits

This elective class is designed as an advanced computer class for senior Toy Design students where they will explore open-ended projects of their own design, building on skills from prior classes in 3D Visualization III. Students will explore advanced techniques of design with Rhino using the software itself as well as specialized plug-ins such as T-Splines for modeling and V-Ray for rendering. The class will also cover techniques and strategies for post processing of renderings in Photoshop, allowing students to work faster and smarter in a professional production environment.

Prerequisite: ToyD 331 3D Visualization III