

# JD: Jewelry Design

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## **JD 000 — JEWELRY DESIGN**

1-3 credit; 1 lab hour

### **JD 101 — Introduction to Jewelry Fabrication**

2 credits; 1 lecture and 2 lab hours

Basic processes used in the design and creation of jewelry. Students fabricate their own designs in the studio.

### **JD 102 — Enameling Techniques for Precious Metals/Fine Jewelry/Objects D'Art**

2 credits; 1 lecture and 2 lab hours

Vitreous enameling on precious metals. Studies include an emphasis on the metallurgical properties of gold, silver, and platinum and their chemical compatibility with enamels. Surface treatments, ancient and modern, that intensify the jewel-like qualities of vitreous enamel on precious metal will be explored. Along with construction techniques that help students transform glass into beautiful, functional jewelry and objects of art.

Prerequisite(s): JD 101.

### **JD 103 — Jewelry and Accessories Fabrication (Interdisciplinary)**

2 credits; 1 lecture and 2 lab hours

This is an interdisciplinary course cross-listed with LD 103. This interdisciplinary course challenges students to combine jewelry and accessories aesthetics, materials and problem solving methodology to create a unique three-piece collection that may include but not limited to sandals, hats, handbags and belts.

### **JD 113 — Beginning Soldering Techniques**

1.5 credits; 3 lab hours

Introduces precision techniques in soldering and shaping jewelry. Emphasis is on exact measurements, and control of jewelry tools and soldering torches.

### **JD 114 — Piercing and Sawing Techniques**

1.5 credits; 3 lab hours

Proper use of the jeweler's saw is emphasized and the eye is trained to understand the balance between positive and negative spaces. Students pierce and saw an intricate design in flat sheet stock. Co-requisite(s): JD 113, JD 121, JD 131, JD 133, and JD 172 or approval of chairperson.

### **JD 115 — Metal Forming Techniques: Chasing and Repousse**

1.5 credits; 3 lab hours

Introduces students to jewelry-forming techniques by making their own dapping and chasing tools by means of forging, annealing, and tempering. Using these tools, objects are created by repousse and other methods.

Prerequisite(s): all first-semester Jewelry Design courses or approval of chairperson "Co-requisite(s): JD 116, JD 122, JD 134, JD 171, and JD 173 or approval of chairperson".

### **JD 117 — Enameling for Contemporary Jewelry**

2 credits; 1 lecture and 2 lab hours

Vitreous enamel has been used for centuries as a means of adding color and richness to precious objects and jewelry. This course examines historical and contemporary uses of enamel, and explores the various methods of its application, including cloisonne, limoges and champleve, the use of silver and gold foils, oxidation, surface finishing and setting techniques.

Prerequisite(s): JD 101.

### **JD 121 — Wax Carving**

1 credit; 2 lab hours

Wax carving of designs suitable for jewelry, stressing illusion and perspective, needed for both brooches and rings. Emphasis is on preparing a design and model for production.

### **JD 122 — Jewelry Casting**

2 credits; 1 lecture and 2 lab hours

Using designs developed in JD 121, students cast, learning the chemistry of alloying metals and the principles in all casting methods. Experience also is acquired in mold-making, spruing, and investing.

Prerequisite(s): JD 121.

### **JD 123 — Wearable Art (Interdisciplinary)**

2 credits; 4 lab hours

This is an interdisciplinary course cross-listed with FA 123. In this team-taught course, students explore the intermingling of sculpture and jewelry. Students connect, interpret and combine traditional fine arts and jewelry-making processes to create wearable art.

### **JD 131 — Mechanical Drafting for Jewelers**

1.5 credits; 3 lab hours

Designed to teach students the fundamentals of mechanical and plan drawing as it applies to materials, mechanisms, concepts, and designs used in jewelry.

Co-requisite(s): JD 113, JD 114, JD 121, JD 133, and JD 172 or approval of chairperson.

### **JD 133 — Introduction to Jewelry Design**

1.5 credits; 3 lab hours

Emphasis is on developing creative ability. A visual sensitivity is developed through museum trips, nature studies, field trips, etc. Suitable rendering techniques, painting, and perspective requirements are covered.

Co-requisite(s): JD 113, JD 114, JD 121, JD 131, and JD 172 or approval of chairperson.

### **JD 134 — Jewelry Design II**

1.5 credits; 3 lab hours

Advanced illustrative techniques in jewelry design. An elementary knowledge of stones, both precious and semi-precious, is given for incorporating in design. Assigned projects focus on industry requirements.

Corequisite(s): JD 115 and JD 116 and JD 122 and JD 171 and JD 173.

### **JD 138 — Introduction to CAD Modeling for Designers**

2 credits; 1 lecture and 2 lab hours

Using current hard-surface modeling software, students will make 2D drawings and model 3D parts, beginning with general exercises and leading to projects specific to their fields of study. Students will learn to develop basic designs and to explore their personal approach to the media. Fluency in basic computer skills is strongly recommended.

### **JD 139 — Jewelry Design & Ideations I**

2.5 credits; 5 lab hours

This course is an introduction to jewelry design concepts and ideation, using analog and computer-aided design. Basic design principles, drawing skills and mechanical drafting are covered.

Corequisite(s): JD 174, or approval of chair.

### **JD 141 — Introduction to Diamonds**

2 credits; 1 lecture and 2 lab hours

This introductory course provides an overview to diamonds, how crystals form, the physical and optical properties of diamonds, and mining techniques throughout history from ancient times to the present day. Other topics include a review of mining locations and techniques, and the cultural, environmental, financial, and global economic impact of diamonds.

### **JD 142 — Gemology and Gem Identification**

3 credits; 1 lecture and 5 lab hours

This course introduces students to gemology and gem identification, with an emphasis on their use in commercial production and price structure. The uses of various gem testing equipment is covered. Students gain basic knowledge of the commonly used gem materials and the ways in which they are used in jewelry.

### **JD 148 — The Science of Jewelry (Interdisciplinary)**

3 credits; 2 lecture and 2 lab hours

This is an interdisciplinary course cross-listed with SC 148. This course gives students an understanding of the scientific properties and geologic origins of materials used in the manufacture of jewelry, current issues in ethical and sustainable sourcing of these materials, and economics of the precious metals past and present. Gen Ed: Natural Science (G3).

### **JD 161 — Changes, Trends & Appraisals**

2 credits; 1 lecture and 2 lab hours

Students study the symbolic meaning and economic rationale for jewelry in society, and are introduced to the science of appraising jewelry. They learn stylistic differences, and the causes and factors behind them, and how styles are influenced by social and political events.

### **JD 171 — Materials and Properties**

2 credits; 2 lecture hours

Students learn basic chemistry and physics as they pertain to materials used in jewelry. Emphasis is on how chemicals and acids used in the industry, and the chemical composition of various stones, affect production.

### **JD 172 — Tools, Equipment, and Processes**

1 credit; 1 lecture hour

Study of the tools, equipment, and supplies used in the jewelry industry. Discusses quality, function, and care of equipment, including sources and pricing.

Co-requisite(s): JD 113, JD 114, JD 121, JD 131, and JD 133 or approval of chairperson.

### **JD 173 — Materials and Findings for the Jewelry Industry**

1 credit; 1 lecture hour

Studies buying procedures, sources, and up-to-date technology in the jewelry industry. Discusses precious and nonprecious materials as well as sizes, nomenclature, and methods used in jewelry manufacturing.

Prerequisite(s): all first-semester Jewelry Design courses "Co-requisite(s): JD 115, JD 116, JD 122, JD 134, and JD 171 or approval of chairperson".

### **JD 174 — Studio Fabrications I**

2.5 credits; 5 lab hours

This course introduces students to the foundation techniques of manufacturing jewelry while addressing safety issues in the studio. Processes covered include, but are not limited to, soldering with the oxygen/gas torch and the use of hand and small machine tools to create jewelry in metal and carving wax models to be cast.

### **JD 181 — Basic Principles of Appraising Jewelry**

2 credits; 1 lecture and 2 lab hours

Establishes methods and values in the appraisal of jewelry and precious and semiprecious stones. Students acquire familiarity with the simple tests that are available and are given guidance on current market prices.

### **JD 200 — Experimental Techniques with Japanese Metal Alloys**

2 credits; 4 lab hours

This course introduces students to experimental techniques in metalworking such as special Japanese copper alloys: Shakudo, Shibuichi and Rosushou colorings and patinations. Alloying metal and patination is explored and used as aesthetic enhancements for art jewelry. Prerequisite(s): JD 101 or JD 174.

### **JD 201 — Mineral Identification and Lapidary**

2 credits; 1 lecture and 2 lab hours

Using appropriate tools and instruments, students learn how to identify a variety of semiprecious materials and their specific properties. Emphasizes applications of these materials for the decorative arts.

### **JD 202 — Enameling for Contemporary Jewelry II**

2 credits; 1 lecture and 2 lab hours

Presents additional contemporary techniques, including the use of liquid enamels, application of decals, and the use of lusters with enamel. Covers the challenging technique of plique a jour. Students design their own projects, experiment with techniques, and further augment their skills while developing an individual aesthetic.

Prerequisite(s): JD 101 or JD 174 or JD 117.

### **JD 203 — Introduction to Stone Setting**

2 credits; 1 lecture and 2 lab hours

This course introduces the art and craft of stone setting, focusing on both the technical and historic. Student projects are engineered to expose, educate and encourage analysis and understanding of the physical parameters needed to securely hold stones and other applicable materials for presentation in the fine jewelry and accessories.

Prerequisite(s): JD 101 or JD 174.

### **JD 213 — Nontraditional Construction Techniques in Metal**

1.5 credits; 3 lab hours

Covers many non-traditional techniques, including but not limited to etching, marriage of metals, roller printing, and Keum-bo. Students explore and utilize these techniques in design and fabrication of unique pieces of metal jewelry.

### **JD 214 — Handmade Diamond Jewelry Techniques**

1.5 credits; 3 lab hours

Students develop the start-to-finish techniques used by industry craftspeople in the creation of handmade diamond jewelry. Includes design layout, making of a copper chablon, planning the weight and use of diamonds, and the cutting of azures.

Prerequisite(s): all second-semester Jewelry Design courses "Co-requisite(s): JD 213, JD 215, JD 216, and JD 251 or approval of chairperson".

### **JD 215 — Alternative Materials for Jewelry Fabrication**

1.5 credits; 3 lab hours

Covers the design approaches and special methods used in the manufacture of jewelry from common industrial materials, such as plastics, rubber, and stainless steel. Students design and produce prototypes for a small collection.

Prerequisite(s): all second-semester Jewelry Design courses "Co-requisite(s): JD 213, JD 214, JD 216, and JD 251 or approval of chairperson".

### **JD 216 — Advanced Piercing and Metal Carving**

1.5 credits; 3 lab hours

Concentrates on advanced piercing and metal carving techniques to create ring designs. Students maintain diaries of sketchwork and research.

Co-requisite(s): JD 213 and JD 214 and JD 215 and JD 251.

### **JD 217 — Handmade Platinum Jewelry**

1.5 credits; 3 lab hours

Introduces various methods used in the making of handmade platinum jewelry, drawing upon skills learned in JD 214. Prerequisite(s): all third-semester Jewelry Design courses "Co-requisite(s): JD 218, JD 219, and JD 252 or approval of chairperson".

### **JD 218 — Hollow Form Jewelry: Die Construction and Manufacturing Techniques**

1.5 credits; 3 lab hours

An intensive study of hollow form jewelry techniques to produce an original finished product of exhibition quality. Includes technical drawing and fabrication of a scale model.

Prerequisite(s): all third-semester Jewelry Design courses "Co-requisite(s): JD 217, JD 219, and JD 252 or approval of chairperson".

### **JD 219 — Clasps, Closings, and Findings**

1.5 credits; 3 lab hours

Based on the principles of mechanical devices, students learn about and produce clasps, closings, and earbacks.

### **JD 231 — Objects Design and Rendering**

1.5 credits; 3 lab hours

Rendering of objects and accessories from shoes and belt buckles to hair ornaments and handbags. Studies colored glass, enamel, and rhinestones used in these accessories.

Prerequisite(s): all second-semester Jewelry Design courses

Co-requisite(s): JD 233 and JD 263 or approval of chairperson.

### **JD 233 — Jewelry Design III**

1.5 credits; 3 lab hours

Students are required to present an entire collection of jewelry around a particular viable theme such as certain stones, metals, or a specific market.

Prerequisite(s): all second-semester Jewelry Design courses

Co-requisite(s): JD 231 and JD 263 or approval of chairperson.

### **JD 235 — Fine Jewelry Portfolio**

1.5 credits; 3 lab hours

Students develop a portfolio of fine jewelry renderings, from a variety of precious and semiprecious materials, that reflect their level of accomplishment and an understanding of industry requirements.

Prerequisite(s): all third-semester Jewelry Design courses

Co-requisite(s): JD 236 or approval of chairperson.

### **JD 236 — Fashion Jewelry Portfolios**

1.5 credits; 3 lab hours

Students prepare a portfolio of costume jewelry renderings, creating seasonal lines that reflect their level of accomplishment and an understanding of industry requirements.

Prerequisite(s): all third-semester Jewelry Design courses

Co-requisite(s): JD 235 or approval of chairperson.

### **JD 237 — 3D Digital Object Design**

2 credits; 1 lecture and 2 lab hours

Focuses on advanced 3D CAD modeling as used in the jewelry industry. Students build skills through modeling organic forms, and learn to combine modeling strategy with problem solving. The course portfolio consists of sophisticated jewelry models ready for digital output.

### **JD 238 — Jewelry Design & Ideations II**

2.5 credits; 5 lab hours

This course explores the design and development of sophisticated jewelry pieces. Professional drafting and rendering techniques are practiced using traditional and digital media. Students use their Gemology knowledge to lend veracity to their use and depiction of gem materials. Objects de vertu are explored as a design challenge found in luxury niche markets. Prerequisite(s): JD 174, or approval of department chair.

### **JD 239 — Design Capstone/Portfolio**

2.5 credits; 5 lab hours

Students create three collections, designed with a common, related theme, in Fine Jewelry, Fashion Jewelry, and Alternative Materials Jewelry. They create two presentations; a portfolio to display the collections of paper, and a display showing actual samples produced during the class. Prerequisite(s): JD 240 and JD 271  
Corequisite(s): JD 267 and JD 274.

### **JD 240 — Jewelry Design Development**

3 credits; 6 lab hours

This course explores the design development process and provides students opportunities to build professional-level design presentation skills. Students also acquire advanced CAD modeling skills, and learn to model to specification. Completed class projects develop into graduating design portfolios as well as provide supporting content for other coursework. Prerequisite(s): JD 139 and JD 238.

### **JD 241 — Introduction to Gemology**

2 credits; 1 lecture and 2 lab hours

Study of the major gem species and their characteristics, with emphasis on their use in commercial production and price structure. Students acquire a thorough knowledge of all precious and semiprecious stones and the ways in which they are used in jewelry.

### **JD 243 — Gemology II**

2 credits; 1 lecture and 2 lab hours

A gem identification course with students learning the use of various laboratory equipment such as the gemological microscope, dichroscope, polariscope, specific gravity balance, refractometer, ultraviolet light, spectroscope, and other instruments used in gem identification. Prerequisite(s): JD 241.

### **JD 244 — Gemology III**

3 credits; 2 lecture and 2 lab hours

In-depth study of gem materials and their synthetic counterparts. Topics include functionality of gem equipment, application to gem testing, and the development of gem material from its atomic natural structure to polished gem state. Prerequisite(s): JD 243 and JD 281, or approval of chairperson.

### **JD 251 — Principles of Silversmithing**

1.5 credits; 3 lab hours

Basic study of silversmithing, including advanced use of repousse, chasing, and forming. Small simple projects in either silver, bronze, or copper are created to study these basic procedures.

### **JD 252 — Silversmithing Project Studio**

1.5 credits; 3 lab hours

Creation of a handmade, hand-formed silver piece with emphasis on developing student's creative ability. Project should be a major work of exhibition quality. Prerequisite(s): JD 251.

### **JD 261 — Changes and Trends in Jewelry Design**

2 credits; 2 lecture hours

Study of the symbolic meaning as well as the economic rationale for jewelry in modern society. Students are made aware of stylistic differences, the reasons for them, and how styles are influenced by social and political events.

### **JD 262 — Estimating Costs**

1 credit; 1 lecture hour

Using current industry pricing standards, students estimate the cost of their own designs made of precious, semiprecious, or nonprecious materials and stones. Prerequisite(s): all second-semester Jewelry Design courses "Co-requisite(s): all third-semester Jewelry Design courses specific to option, or approval of chairperson".

### **JD 263 — Costume Jewelry Production and Marketing**

3 credits; 3 lecture hours

Explains jewelry fashion theory, principles, and cycles and their relationship to jewelry line development while studying trends in ready-to-wear, European, and American designer collections. Prerequisite(s): all second-semester Jewelry Design courses Co-requisite(s): JD 231 and JD 233.

### **JD 267 — Jewelry Seminar/Best Business Practices**

2.5 credits; 1 lecture and 3 lab hours

Using current industry price standards, students estimate the cost of their own designs made of precious, semi-precious, or non-precious materials and stones. Corequisite(s): JD 239 and JD 274.

### **JD 271 — Alternative/Sustainable Materials**

2.5 credits; 5 lab hours

This course explores alternative materials for jewelry and small object design. Various natural and synthetic materials are covered such as, but not limited to, plastics and resin, wood, cement, glass, aluminum, and steel. Sustainable sourcing and working methods are stressed and emphasis is placed on professional working techniques and manufacturing practices.

Prerequisite(s): JD 272 or approval of chair  
Corequisite(s): JD 240.

### **JD 272 — Studio Fabrication II**

2.5 credits; 5 lab hours

Students learn to manipulate metal, using techniques ancient and modern, to create precision models for serial production, coupled with an in-depth study of hollow form construction and finishing. Emphasis is placed on professional working techniques and manufacturing practices.

### **JD 273 — Studio Fabrication III**

2.5 credits; 5 lab hours

This course extends the concept of designing and fabricating jewelry for production. Stone setting and the engineering of static and articulated systems for fine jewelry is covered. Alloying metal and patination are explored and used as invaluable aesthetic enhancements for fine jewelry.

Prerequisite(s): JD 272  
Corequisite(s): JD 240.

### **JD 274 — Fabrication Capstone/Portfolio**

2.5 credits; 5 lab hours

This capstone course explores components and processes necessary for finishing jewelry, from mechanical systems to finishing techniques, culminating in the fabrication of a suite of jewelry demonstrating skills and concepts studied in the program. Production of the suite is integral to concurrent fourth semester design and project management courses.

Prerequisite(s): JD 273 and JD 240  
Corequisite(s): JD 239 and JD 267.

### **JD 281 — Diamond Grading**

2 credits; 1 lecture and 2 lab hours

Explores techniques for grading diamonds by color, clarity, and cut. Includes basic knowledge required for diamond selection and establishment of base for pricing. Discusses history and technical terms pertaining to diamond grading.  
Prerequisite(s): JD 141.

### **JD 299 — Independent Study in Jewelry Design**

1-3 credit

Prerequisite(s): a minimum 3.5 GPA and approval of instructor, chairperson, and dean for Art and Design.