JD: Jewelry Design

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. (G6: Arts).

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.
Co-requisite(s): JD 114, JD 121, JD 131, JD 133, and JD 172 or approval of chairperson.

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 116 — Costume Jewelry White Metal Models

1.5 credits; 3 lab hours

Students learn white metal modelmaking techniques and develop skills in the basic hand and machine processes used in the production of costume jewelry. These models will be made into molds and produced in JD 122.
Prerequisite(s): all first-semester Jewelry Design courses "Co-requisite(s): JD 115, 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 looks at the 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.

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.
Co-requisite(s): JD 113, JD 114, JD 131, JD 133, and JD 172 or approval of chairperson.

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 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.
Prerequisite(s): all first-semester Jewelry Design courses "Co-requisite(s): JD 115, JD 116, JD 122, JD 171, and JD 173 or approval of chairperson.

JD 138 — Introduction to CAD for Jewelry Design

2 credits; 1 lecture and 2 lab hours

Students create two- and three-dimensional computer-generated drawings and models specific to jewelry design. Using modeling software and other computer applications, students develop basic jewelry design skills to create a personal style.
Prerequisite(s): CG 111 and JD 131 or approval of chairperson.

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

3 credits; 2 lecture and 2 lab hours

This is an interdisciplinary course cross-listed with 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 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 213 — Nontraditional Construction Techniques in Metal

1.5 credits; 3 lab hours

Acquaints students with little-known experimental techniques in metalworking such as the Japanese methods of mokume-gane and shakudo.
Prerequisite(s): all second-semester Jewelry Design courses "Co-requisite(s): JD 214, JD 215, JD 216, and JD 251 or approval of chairperson.

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.

Prerequisite(s): all second-semester Jewelry Design courses "Co-requisite(s): JD 213, JD 214, JD 215, and JD 251 or approval of chairperson.

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.

Prerequisite(s): all third-semester Jewelry Design courses "Co-requisite(s): JD 217, JD 218, and JD 252 or approval of chairperson.

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

This advanced digital course focuses on the creation of 3D models for the jewelry industry. Students develop control over digital commands through modeling basic forms. By combining modeling strategy and problem solving, they create and re-work solid objects, resulting in sophisticated jewelry models, ready for output to digital production hardware.
Corequisite(s): JD 273 and JD 271.

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 237 and JD 271
Corequisite(s): JD 274 and JD 267.

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

1.5 credits; 3 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

An in-depth study of gem materials and their synthetic counterparts is provided. Topics include functionality of gem equipment and its application in gem testing, and an understanding of the development of a gem material from its atomic structural nature to a polished gem.
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.
Prerequisite(s): JD 237, JD 271, and JD 273
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, woode, 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 237, or approval of chair.

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. Ephasis 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 237.

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 271, or approval of chair
Corequisite(s): JD 239 and JD 267.

JD 281 — Diamond Grading

2 credits; 1 lecture and 2 lab hours

Teaches techniques of grading diamonds as to color, clarity, and cut, including basic knowledge needed for diamond selection and establishment of base for pricing. Discusses history and technical terms pertaining to diamond grading.

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.