JD: Jewelry Design

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 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 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 or JD 174.

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
Learning will be accomplished through lecture, demonstration and skill building. Using their own designs, students will cast and learn the chemistry of alloying metals, converting wax weight to metal weight as well as the basic principles of casting metal.

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 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 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 4 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 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 174 — Jewelry Fabrications I
2.5 credits; 5 lab hours
This course introduces the foundation techniques of manufacturing jewelry while addressing safety issues in the studio. Taught are the basic processes involving, but not limited to, soldering with gas/oxygen torches and the use of hand and small machine tools to create jewelry directly in metal and by carving wax.

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 202 — Enameling for Contemporary Jewelry II
2 credits; 1 lecture and 2 lab hours
Presents additional contemporary techiques, 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 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 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 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 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 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 and Ideation II
2.5 credits; 5 lab hours
This course builds upon ideation principles to develop professional design techniques with a practicum focused on drawing from observation, design sketching, technical drawing, and color illustration. In the CAD module, students build a strong foundation of basic modeling techniques and strategies that are applied to successively complex jewelry maquettes.
Prerequisite(s): JD 139 and JD 142 and JD 174.

JD 239 — Design Capstone Portfolio
2.5 credits; 5 lab hours
This capstone design portfolio course is an advanced design and CAD modeling course, and is conducted in tandem with s sibling fabrication course. Three of the designs completed in this course are fabricated to completion in sibling fabrication learning environments. Students also strategize and develop individualized professional portfolios.
Prerequisite(s): JD 240
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 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 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 for Jewelry
2.5 credits; 5 lab hours
This course explores alternative/sustainable materials for jewelry and small object design. Natural and synthetic materials are covered, including but not limited to, plastics, resins, wood, cement. aluminum and steel. Sustainable sourcing and working methods are stressed. Emphasis is placed on professional working techniques and manufacturing processes.
Prerequisite(s): JD 272 or approval of chair.

JD 272 — Studio Fabrications II
2.5 credits; 5 lab hours
This course enables students 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.