

B. Voc in Jewellery Production and Manufacturing Technology

Year 2 – Semester 3

Course Code: D706

Paper Code:

Title: Gemstone Setting

Pre-requisite: N.A.

Objectives: The Module Aims

- To familiarize students to different Gemstones, Shapes, Sizes and Different Cuttings.
- To understand the basic Process of manufacturing of Different types of Collets of appropriate size of the stones.
- To understanding of Mounting and Exposure of different Settings.
- To understanding adding shank with collets in the rings

Syllabus:

- Orientation to relate different stone Shapes, Sizes and Collets
- Development of desired Sheet of thickness and Proportion.
- Methods of calculating the perimeters of design
- Fabrication techniques of collets preparation for prong and bezel setting
- Developing shank according to collets size & shapes as pre requirement of design

Suggested books and references:

- MacGrath, Jinks, (1995) Encyclopedia of Jewellery Making Techniques, USA, Running Press Publishers.
- Oppi.U. (1985). Jewellery Concepts and Technology, New York, Doubleday
- “Creative Variations in Jewelry Design” By Maurice P. Galli (Author)Publisher: Schiffer Publishing (Jan 1997)
- “The Art of Jewellery Design: Principles of Design, Rings and Earring”
- Maurice P. Galli (AuPublisher:Schiffer Publishing Ltd (10 Dec 1998)
- “Jewellery Design Handbook: Le Design des Bijoux / Schmuckdesign /Juweelontwerp” By Marta Serrats (Author)Publicing: Booqs; Mul edition (26 April 2010).

Assignments: Documentation 30% and final products 70%

Scheme of Examination: Self (Jury)

Learning Outcome:

By the end of this unit, Students will be able to:

- Identify gemstones with basic properties for different setting
- Proficiently make collets of Different Shapes, Sizes, and Heights.

- Work with minute details with intricacy and accuracy of any types of ring
- Develop any types of decorative shank
- Balancing of position of a Shank and a Crown
- Measuring of gemstones with instruments.
- Development of desired Sheet of thickness and Proportion
- Making different size shape of Collets for Settings i.e. Prong, Bezel.
- Making any types of shank for requirement of ring

Title: Gemstone Studies & Processing

Pre-requisite: N.A.

Objectives: The Module Aims

- To orient the students to broad based understanding of various precious and semi-precious gemstones on basis of their characteristic.
- To enable the students to develop an understanding of basic parameters of various gemstones according to different end uses.
- Understanding the process of gemstone identification and recognition of different cuts & their uses in relation to various Jewellery products.

Syllabus:

- Introduction to various colours of Precious and semi-precious gemstones, their characteristics, simulant, Physical & optical properties etc.
- Different types of shapes and cuts & terminology.
- Study Crystallography of gemstones
- Study of Synthetic Gemstones
- Quality assessment of gemstones on the basis of color and transparency.
- Process of assortment and grading rough stone, sawing, Pre-shaping, Calibration, dopping, Faceting and polishing of faceted and cabochon
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Suggested books and references:

- Michael.O'D. (1994) The Colour Dictionary of Gemstones & Minerals, London, Blackcat.
- Richard.L. (1993) Handbook of Gem Identification, CA., Gemological Institute of America.
- Dana Mohsen.M. (2000) Dictionary of Gems and Gemology, Springer-Verlag Telos
- Gem Cutting: A Lapidary's Manual by John Sinkankas
- Cutting Gemstones: A Beginner's Guide to Faceting By John Broadfoot, Peter Collings

Assignments: Documentation 30% and final products 70%

Scheme of Examination: Theory Exam

Learning Outcome:

By the end of this unit, Students will be able to:

- Identify different precious & semi-precious stones
- Identify various cuts, their application in different Jewellery & begin to appreciate colour & visual appeal
- Identify various parameters including the 4 c's etc in order to develop an overview of the BRD factors behind most natural & synthetic gemstones which form the underpinning of the global gem trade

- Identify different shape, size and cut of gemstones
- Understand the process involved in cutting and polishing of faceted and cabochon gemstone

Title: Precious Jewellery Manufacturing Project

Pre-requisite: N.A.

Objectives: The Module Aims

- Develop appreciation & basic understanding of Jewellery classification, types, components, hardware & nomenclature.
- Develop hand skills of Jewellery fabrication techniques with familiarity of related tools & processes.
- Orientation to various processes involved in “Precious Jewellery making”.
- Appreciate conceptual understanding of Precious materials & process relationship from their limits & potential.
- introduce skills & capabilities to apply various processes using tools, machinery & equipment to realize specific products/components

Syllabus:

- Safety measures: Orientation to issues related to safety, health and environmental related issues.
- Jewellery Construction as per world skill standards: skills development & process understanding of basic techniques of Jewellery fabrication as well as application of related tools & equipment. Construct jewellery including includes pendant, earring, types of ring, etc.
- Jewellery components: understanding of Jewellery classification, various components used in fabrication, assembly, findings & hardware as well as related terminology

Suggested books and references:

- Codina.C. (2000) The Complete Book of Jewelry Making: A Full-Color Introduction To The Jeweler's Art, Lark
- Lawrence.K. (2000) Modeling in Wax for Jewelry and Sculpture, 2nd Rev edition, Krause Publications.
- Oppi.U.(1985) Jewellery Concepts and Technology, New York, Doubleday.
- Sylvia.W. (1990), Jewellery Making manual, London, McDonalds Illustrated.
- MacGrath,J. (1995), Encyclopedia of Jewellery Making Techniques, USA ,Running Press Publishers,
- Joanna.G. (2003), Making Metal Jewellery: Projects, Techniques, Inspiration, Lark.
- McCreight.T., (1997), Jewellery Fundamentals of Metal Smithing, Brynmorgen Press.
- MacGrath.J. (1995) Encyclopedia of Jewellery Making Techniques, USA, Running Press Publishers.
- Ashby, Michael, Johnson, Kara, (2002). Materials & Design: The Art and Science of Material Selection in Product Design, Butterworth-Heinemann.

Assignments: Documentation 30% and final products 70%

Scheme of Examination: Self (Jury)

Learning Outcome:

By the end of this unit, Students will be able to:

- Consider various safety and health related measures considering environmental issues.
- Display work & process planning skills during the process of making
- Appreciate specific use of tools, equipment & material behavior.
- Ability to appreciate and incorporate safety systems in the workshop.
- Identify the different materials & processes used in Jewellery.
- Identify different methods of material manipulation with an understanding of their limitations & appropriate application
- Acquire the skills & operating knowledge of the Machines used for different processes
- Develop market awareness about sourcing of different materials & their available forms with specs
- Construct jewellery products as per specification and standards.
- Present the jewellery with process documents in front of the juror's.