B. Voc. in Jewellery Design

Semester 3

3D Computer Aided Jewellery Design

Pre-requisite: N. A.

Objectives: The Module Aims

To introduce the students to

- Develop a thorough understanding of 3D Cad Application.
- Enable the student to work with 3DCAD software effectively and apply the learnt skills successfully to 3D design assignments.
- It also emphasizes on guiding students about implementation of various designing skills and techniques for generating self-create design.
- To develop a Confidence for creating a Jewellery Design in 2D form and Converting in 3D object. Develop divergent thinking abilities to create innovative solutions.
- To develop a brief & develop design collection and submit a digital portfolio

Syllabus:

- Vector & raster-based systems
- Functions of 3D CAD software & their applications
- Creating 3D object by orthographic projections & manipulating basic solid forms
- Sections, volumes, weights & surface areas
- Rendering & use/development of materials library
- Presentations through tools of lighting, background, special effects
- Prototyping & product realization
- Presentation & documentation of process & final design products

Suggested books and references:

- AutoCAD, 3D Studio Max, SDRC Ideas, Jewel CAD, Rhinoceros software manuals

Assignments: Documentation 30% and Project 70%

Scheme of Examination: Self (Jury)

Learning Outcome:

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

- Develop confidence in using 3D CAD applications in design visualization, presentations & technical specifications
- Apply solid modeling to their design projects
- Create files with requisite technical specifications for rapid prototyping system
- Evaluate technical parameters, visual feel & material optimization of design prior to being made physically.
- Develop design collection
- Submit a digital & printed portfolio.

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

Suggested books and references:

- Michael.O'D. (1994) TheColour Dictionary of Gemstones & Minerals, London, Blackcat.
- Richard.L. (1993) Handbook of Gem Identification,CA., Gemological Institute of America.
- DanaiMohsen.M. (2000) Dictionary of Gems and Gemology, Springer-VerlagTelos
- 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: Self (Jury)

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

Modelling & Sculpting for Jewellery

Pre-requisite: N.A.

Objectives: The Module Aims

- To familiarize with basic wax/ terracotta/moldable ceramic / pop carving techniques.
- to develop skills of wax/ terracotta/ moldable ceramic / carving techniques using tools and process appropriately to the intended application in design realization and applications

Syllabus:

- Introduction to wax / terracotta/moldable ceramic / sheets, blocks, tubes, wires etc.
- Introduction to wax / terracotta/moldable ceramic / pop carving techniques
- Limitation and inherent strengths of wax / terracotta/moldable ceramic / pop as a modelling material.
- Sculpting & modeling
- Apply additive & subtractive material manipulation.
- Master Model

Suggested books and references:

- Chris.L. (2004). Inspirational Design: Metal, Rotovision.
- Beata, T. (2001) Paper, Conran, Octopus Limited.
- Verhelst, W (1973) Sculpture: Tools, Materials and Techniques, Prentice Hall.
- Jaya.J. (1990) Craft Traditions of India, Tiger books,
- Oppi.U. (1985) Jewellery Concepts and Technology, New York, Doubleday,
- History of Indian Jewellery

Assignments: Documentation 30% and Final products 70%

Scheme of Examination: Self Exam (Jury)

Learning Outcome:

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

- Handle wax/ terracotta/moldable ceramic /pop as medium for communication of design ideas
- Translate 2D into 3D using different wax/ terracotta/moldable ceramic / pop carving and model making
- Develop skills for creating a master model in wax. / terracotta/moldable ceramic / pop

Precious Jewellery Project

Pre-requisite: N.A.

Objectives: The Module Aims

- Provide advanced experience to the students to design & develop "precious jewellery collection" (traditional or contemporary)
- Students would be encouraged to work independently.
- To inculcate the concept of contextual design research. This module aims to develop in students an ability to develop a brief professionally.
- To apply creativity to develop their own uniquely styled design collection from concept to final prototype/mockup of original design.
- To approach precious Jewellery with flair & abundance of stretching pre-conceived limits.

Syllabus:

- To design & develop "precious jewellery collection" (traditional or contemporary)
- Development of individual style through experimentation of themes,
- innovative techniques & form manifestation
- Extensive exploration of concepts for collection through material & visual
- mediums
- Detailing & materials/treatment/components finalization
- Prototyping & product realization
- Presentation & documentation of process & final design products

Suggested books and references:

- Mascetti, Daniaela&Triossi, Amanda, (1996). "Bvlgari", Milan, Leonardo Arte
- srl.
- Bennett, David &Mascetti, Daniaela,(1990), Understanding Jewellery, UK,
- Antique Collectors Club.
- Usha.B. (1999). Dance of the Peocock, New Delhi, India Book House.
- Frings, (1996). Fashion from Concept to Consumer, New Jersey, Prentice
- Hall.
- Elizabeth.R. (1999). Understanding Fashion, London, Blackwell Science.
- Trade Journals & Magazines
- Fashion magazines- Vogue, Jewellery Key Stone, JCK, Collezioni, Simplicity,
- Femina etc.

Assignments: Documentation 60% and Final products 40%

Scheme of Examination: Self (Jury)

Learning Outcome:

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

- On completion of this module the student should be able to:
- Understand & apply the process of precious jewellery collection design

- Undertake critical self and peer evaluation
- Demonstrate an individual sense of research & critical analysis through explorations.
- Demonstrate individual flair beyond typically commercial products in precious Jewellery
- Confidently approach new concepts & styles demonstrating potential of materials & processes.
- Realize products in finer details as working prototypes
- Present the design collections with aesthetic sophistication