

BHARATHIAR UNIVERSITY :COIMBATORE 641 046

B.Sc. Jewelry & Accessory Design

(For the CPP/COP students admitted from the academic year 2016-17 onwards)

SCHEME OF EXAMINATION – CBCS PATTERN

| Part | Course Title | Instructions hr / week | Examinations | | | | Credit |
|-------------------|--|---------------------------|--------------|-----|----------|-------|--------|
| | | | Duration | CIA | Uni.Exam | Total | |
| SEMESTER-1 | | | | | | | |
| I | Language-I | 6 | 3 | 25 | 75 | 100 | 4 |
| II | English-1 | 6 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper I: Basic of Color/Color Appreciation | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Practical I :Life Drawing -Lab | 6 | 3 | 40 | 60 | 100 | 4 |
| III | Allied 1-Volume 3D Appreciation - Lab Practical | 6 | 3 | 40 | 60 | 100 | 4 |
| IV | Environmental Studies# | 2 | 3 | - | 50 | 50 | 2 |
| SEMESTER-2 | | | | | | | |
| I | Language-II | 6 | 3 | 25 | 75 | 100 | 4 |
| II | English-II | 6 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper II : Art History & Visual Culture | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Practical II : Observation Drawing – Lab | 6 | 3 | 40 | 60 | 100 | 4 |
| III | Allied 2 - CAD/Computer Fundamentals Practical | 6 | 3 | 40 | 60 | 100 | 4 |
| IV | Value Education-Human Rights# | 2 | 3 | - | 50 | 50 | 2 |
| SEMESTER-3 | | | | | | | |
| III | Core Practical III :Jewellery Design Concept-I | 5 | 3 | 40 | 60 | 100 | 4 |
| III | Core Paper III : Design & Manufacture-I | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Practical IV : Technical Drafting | 5 | 3 | 40 | 60 | 100 | 4 |
| III | Core Paper IV : Metallurgy & Surface Sciences | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Allied paper 3 : Computer Lab 2D - Practical | 5 | 3 | 40 | 60 | 100 | 4 |
| IV | Skill Based Subject-I, Design & Manufacture LAB 1 Practical | 4 | 3 | 30 | 45 | 75 | 3 |
| IV | Tamil @ / Advanced Tamil# (OR)Non- major elective -I (Yoga for Human Excellence)# / Women's Rights#/Constitution of India# | 2 | 3 | 50 | | 50 | 2 |

| SEMESTER-4 | | | | | | | |
|-------------------|--|--------------|---|----|----|-------------|------------|
| III | Core Practical V : Jewellery Design Concept-2 | 6 | 3 | 40 | 60 | 100 | 4 |
| III | Core Paper V :Design & Manufacture-2 | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper VI : History of Jewellery Design | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper VII :Photography | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Allied paper 4: Computer Lab 3D-1 - Practical | 6 | 3 | 40 | 60 | 100 | 4 |
| IV | Skill Based Subject-II, Design & Manufacture LAB 2 Practical | 4 | 3 | 30 | 45 | 75 | 3 |
| IV | Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #) | 2 | 3 | 50 | | 50 | 2 |
| SEMESTER-5 | | | | | | | |
| III | Core Practical VI : Jewellery Design Concept-3 | 6 | 3 | 40 | 60 | 100 | 4 |
| III | Core Paper VIII : Design & Manufacture-3 | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Practical VII : Computer Lab 3D-2- | 6 | 3 | 40 | 60 | 100 | 4 |
| III | Core Paper IX : Introduction to Gemology | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper X : Visual Communication | 4 | 3 | 25 | 75 | 100 | 4 |
| IV | Skill Based Subject-III, Design & Manufacture LAB 3 Practical | 6 | 3 | 30 | 45 | 75 | 3 |
| SEMESTER-6 | | | | | | | |
| III | Core Paper XI : Diamond Grading | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper XII : Marketing & Merchandising Management | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Core Paper XIII: Entrepreneurship | 4 | 3 | 25 | 75 | 100 | 4 |
| III | Design Project * | 12 | 3 | - | - | 150 | 6 |
| IV | Skill Based Subject-IV, Diamond Grading LAB Practical | 6 | 3 | 30 | 45 | 75 | 3 |
| V | Extension Activities @ | | | 50 | - | 50 | 2 |
| | | TOTAL | | | | 3500 | 140 |

\$ Includes 25/40% continuous internal assessment marks for theory and practical papers respectively.

@ No University Examinations. Only Continuous Internal Assessment (CIA)

No Continuous Internal Assessment (CIA).OnlyUniversity Examinations.

***For report: 80% Marks & Viva-Voce: 20% Marks.**

Semester 1

Core Paper I : Basic of Colour / Colour Appreciation

Programme indicative Content:

Unit 1 :The colour wheel – different formats – colour terminology – active and passive colour, cold and warm, colour relationship, Discovering and material experimentation.

Unit 2 :The colour wheel – dosage, Mix of colour – secondary and tertiary colours, The gray from the primary colours, The gray values scale, Complementary colours – visual illusion perceptual opposites,

Unit 3 :Colour combinations- monochromatic relationship complementary relationship – split complementary, relationship double complementary relationship – analogous relationship, triad relationship.

Unit 4 :Colour and contrast, Simultaneous contrast, colour blind efficiencies , Choosing complementary colours, Itten's colour contrast, The contrast of saturation , The contrast of light and dark, The contrast of extension , The contrast of complements Simultaneous contrast, The contrast of hue, The contrast of hue – primary, The contrast of warm and cool.

Unit 5 :Proportion and intensity, Contrast and dominance , Colour shade and tints, The name of the colour, cultural approach – psychology approach. Colour the symbolism – history of the colour.

Reference Books

1. Color (Detail Practice); Alex Buether
2. Color: A Natural History of the Palette; Victoria Finlay
3. Understanding Color: An Introduction for Designers; Linda Holtzschue
4. Color Theory: An Essential Guide to Color – from basic principles to practical application (Artist's Library); Patti Mollica
5. Color by Betty Edwards: A Course in Mastering the Art of Mixing Colors; Betty Edwards
6. The Elements of Color: A Treatise on the Color System of Johannes Itten Based on His Book the Art of Color; Johannes Itten

Core Practical I : Life Drawing –Lab

Programme indicative Content:

Unit 1 :How to draw the figure, Proportions of the human figure, measurement, movable masses. Positive and negative spaces, the composition and balances between empty and full spaces.

Unit 2 :The basic posture, the balances, the rhythm, turning or twisting , Light and shade, texture catching rendering .The human head, drawing the head perspective of the head – distribution of masses of the head – proportion of the head –comparative measurement, head profile.

Unit 3 :The arms, the legs, mass studies, shortcut, The hand and the feet – mass studies mechanism shortcut. Gestural drawing on large format- feel and draw what the model is doing approach of graphic rendering, texture lighting , Life drawing with drape, focus on the construction, the graphic style, the texture using a mix of techniques, white colour as the light on coloured paper.

Unit 4 : Life drawing and expression development of the expression instead of the precision. Study of Schiele's work, Life drawing and graphic research creation of a graphic effect library and used of mix techniques, textural gradient and form. Life drawing and group of people, Observation of the disturbance, the space and movement between the people, Position the horizon, Working by rendering, and mass.

Unit 5 :Life drawing and contraction, Special angles, the contraction of the body reconsidering the volume of the body, Dramatic effect with shade and shadows.Life drawing and memory, Face expression.

Reference Books

1. Keys to Drawing; Bert Dodson
2. Drawing Lessons from the Great Masters. Robert Beverly Hale, Jacob Collins
3. Perspective Made Easy (Dover Art Instruction); Ernest R. Norling
4. Perspective Drawing Handbook (Dover Art Instruction); Joseph D'Amelio
5. Art Fundamentals: Color, Light, Composition, Anatomy, Perspective, and Depth; Gilles Beloeil, Andrei Riabovitchev, Roberto F. Castro

Allied Paper 1 - Volume 3D Appreciation Lab (Practical)

Programme indicative Content:

Unit 1 :Basic elements of Design – line, plane, volume, mass, movement, shape form space, value, texture.

Unit 2 : Material and structure, Design, organizational-proportion repetition, rhythm, emphasis, balance, symmetry and hierarchy, Processes – constructing, modeling, carving, casting and fabrication, Materials appreciation – clay, plaster, wire paper etc. Material and structure

Unit 3 :Visual and material and structure conceptual investigations introduced in 3D, Idea generation and development, Various states in the design process, Selection of material and techniques, Execution, Evaluation.

Unit 4 :Collage, assemblage and found object, Development of collage and assemblage focus in western art, Influence and development on contemporary image making and material use from cubist DADA, surrealist, Post war abstract expressionism, Links between 2 D and 3D.

Unit 5 : Skeletal structure – machinery, organic forms , architecture dynamics and supporting structure, Movement, rhythm an progression, Structure and negative space.

Reference Books

1. Clay Modeling; Irwin L. Watts
2. Figure Sculpting Volume 1: Panes and Construction Techniques; Philippe Faraut

Semester : 2

Core Paper II : Art History and Visual Culture

Programme indicative Content:

Unit 1 :What is Art History? Art Appreciation and introduction to aesthetics. Presentation of the main periods of western art history and their evolutionary principle, Antiquity, Medieval period.

Unit 2 : Classic period, Modern period, Contemporary period, Link with the Asian history , Gupta Art, Manuscript painting, Miniature paintings., Japanese wood block prints ., Chinese ceramics and bronzes, Analyses , Bayeux tapestry, Illuminations, Book of Kells, the Limbourg brothers, Classical period- Italian renaissance , Late renaissance – Mannerism, Return to classic, Baroque and Classicism, Eighteenth and nineteenth century.

Unit 3 : 1860 the beginning of the contemporary art, Realist and Symbolist, The impressionist, PostImpressionism, Cubism, Futurism Photograph, The Abstraction is born,

Unit 4 :Modernist sculpture, New York the new art scene, Everyday objects entering the art, Minimal art, land art, street art,

Unit 5: The post Modernism – performances – installation and video.The fields of art, Links between art and graphic arts.

Reference Books

1. The Story of Art; E. H. Gombrich
2. Art History, Combined Volume; Marilyn Stokstad and Michael W. Cothren
3. History of Art; H. W. Janson and Anthony F. Janson
4. Art: A World History; Elke Linda Buchholz, Susanne Kaeppele, Karoline Hille
5. Shock of the new by Robert Hughes
6. Joy of Art by David

Core Practical II : Observation Drawing Lab

Programme indicative Content:

Unit 1 :Beginning exercises – live gesture drawing, mass scribble, diagonal stroking, continuous line drawing, mind mapping.Spatial relationships – linear perspective – relative proportion – planes and volume – positive and negative space. Basic design structure – compositional analysis, other, memory analysis.

Unit 2: Value, pattern and texture using direct drawing and stenciling.Compositional practices – recycled drawings,Academic study.Observation through a strict construction, aids, guides, and perspective, Observation study enhanced by a mix techniques approach.

Unit 3: Quality of a still drawing, Approach of the emotion through the noise, depth of the view, the rendering, the framing, Still drawing, studies of a composition , The drawing and the choices, Angle view, Techniques, Framing, The ambiance as the intention , Rethinking the observation.

Unit 4: Texture and graphic research, Disturbance and fast drawing .Still drawing and scale appreciation, Specific point of view , Still drawing and value appreciation , Specific point of view , Chiaroscuro - working from the middle .

Unit 5 :Objects and memory, From the illustration from the memory, Illustrative choices vs technical choices .

Reference Books

1. Drawing Essentials: A Guide to Drawing from Observation; Deborah Rockman
2. Drawing from Observation: An Introduction to Perceptual Drawing; Brian Curtis

Allied Paper 2 - CAD / Computer Fundamentals (Practical)

Programme indicative Content:

Unit 1 :Discover the computer environment of Macintosh and Mac OS, Discover of internet, flicker, pic finder, Different browsers, Introduction to different professional website, Transferring data and loading – uninstalling a software onto a computer.

Unit 2: Font dictionary and creating PDF document,scanning, importation of image, from camera and scanner saving a document the different format.

Unit 3 :About cutouts and fuzziness, making a relevant cutout of faces and image the cropping tools, Colour manipulation on Photoshop differences between RGB and CMY – the non-printablecolour, difference between print and screen approach of the resolution, knowledge about the bitmap image - scale and framing.

Unit 4: Photoshop environment – The tools in photoshop - The layers in Photoshop - The history in photoshop

Unit 5 : Basics of illustrator / the interface - Tools and path info the vector design - Illustrator and the gradients (radial , line , mesh) - The vectorial design - The masks, the layer from illustrator to photoshop - Photoshop to illustrator.

Reference Books

1. A Simple Guide to the Mac; Samuel Harris
2. Adobe Photoshop CS6 Bible; Brad Dayley and DaNaeDayley
3. Adobe Photoshop CS5 Bible; Ted Alspach

Semester 3

Core Practical III :Jewellery design Concept 1

Programme indicative Content :

Unit 1 : Working From A Design Drawing And Creative Experimentation With Workshop Technique , Related to 2D design, Direct with materials, Understanding of the materials , adaptation of the drawing to the design.

Unit 2 : Multi Media Project Introduction of making jewellery with alternate, Material From the mood board to the final samples. Understanding the importance of the alternate jewellery in contemporary design

Unit 3 : Samples Using The Available Raw Material/Any Base Material, Earrings :5models, Fingerring :5models, Bangles, Bracelet/watches, Chain, Necklace, Purse/wallet, Cellphone covers, Belt, Hairband 5models.

Unit 4 : Form/Surface Introduction Project And Transfer Of Design Information, Form, Surface , Texture. Understanding of a design according to the specificities in term of form , shapes and surfaces

Unit 5: Form/Surface Introduction Project and Transfer of Design Information, Colour, Material. Understanding of a design according to the specificities in term of colour, surfaces and materials

Reference Books

1. Principles of form and design- Wueius Wong
2. The Decoupage source book- Innesjocasta& Walton Stewart
3. Shapes and Colours – Atsa Lin Mike Co., Bradbury, Lynne
4. Traditional Jewellery of India – Oppi Untacht 1997

Core Paper III : Design & Manufacture -1

Programme indicative Content:

Unit 1: Introduction To Workshop Practice And Procedures, Tools and equipments and its uses, Rolling mill, Foredom motor, Tube drawing machine, Fly die press, Drilling machine, Buffing machine, Bangle sizing machine, Annealing chamber, Electroplating bath, Polishing machine like, Drum polisher, Magnetic polisher, Ultrasonic cleaner. Pen plating, Chain press machine, Coin press machine, Automatic link making machine, Holding tools, Direct striking tools, Indirect striking tools, Compression tools, Cutting tools, Metal removal tools, Torsion tools, Mechanized rotary motion power tools, Soldering and heating area , Gas supply and emergency shut off , Acid tank, Main power supply and emergency shutoff , Metal store cupboard , General workshop area , Technician availability , Soldering and heating area , Gas supply and emergency shut off, Acid tank, Main power supply and emergency shut off , Metal store cupboard , General workshop area, Technician availability.

Unit 2 : Common Methods Of Working, Melting, Wire rolling and drawing exercises, Annealing, Pickling, Fusing, Fabrication, Soldering, Repair works, Buffing, Polishing, Finishing.

Unit 3: Basic Techniques (Goldsmithing Basic), measuring and marking out , Steel ruler, Divider, Outside caliper, Inside caliper, Vernier calipers, Center punch, Scriber, Try square, Cutting, Drilling, Filing, Straight filing, Square filing, Round filing, Arch filing, T joint, T and U-joint, L-joint, Heating , Soldering, Sawing, Straight sawing, Arch sawing, Zigzag sawing, Round sawing, Square sawing, Step sawing, Birds and animals design sawing, English and Kannada design sawing, Technical Exercises- Basic broach pin and catch, Wire work (chain making) 3” of 6 types , Use of different shape draw plate, Drawing readymade chain, Use of grooved rolling mill, Simple dome earring, Simple earring using all techniques.

Unit 4: Acid Etching Introduction, Use of technique intaglio and relief, Explanation about health, safety and ventilation, Disposal of waste, Emergency action, Mixing of acid, Single etch, Multiple etc.

Unit 5: Practical Techniques – Engraving, Explanation with different graver Square, Round, Octagonal, Flat, Oval, Knife, Liner, Technical Exercises- Simple bezel collet making , Simple prong collet making, Breakdown of the component required, Manufacture of each component, Material to be used, Assembly procedure, Finishing.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Core Practical IV : Technical Drafting

Programme indicative Content :

Unit 1: Drafting And Layout/ Mounting Alternative, Technical Drawing Of Basic Stone Types And Cuts, Faceted And Cabochon Of Round, Oval, Baguette square, Baguette taper, Trillion, Marquise, Princess, Emerald, Pear, Heart.

Unit 2: Perspective 1 point 2 points, The eyes level, And Technical Drawing, ABOVE, BELOW, AND ON THE HORIZON LINE: an in-depth discussion surrounding the fundamental components of geometric perspective, including horizon line, vanishing point(s), and perspective lines. This section is divided into the following four parts: Your eye level is on the horizon o A worm’s eye view A bird’s eye view, View from a level perspective, DISAPPEARING INTO A VANISHING POINT: an introduction to various tools used by artists for creating the illusions of depth, including overlapping, size differences, and arrangement, as well as an illustrated explanation of one-point perspective. EXPANDING ON ELEMENTS OF PERSPECTIVE: a discussion surrounding two more integral elements of perspective, aerial (or atmospheric) perspective and foreshortening. Fading into distant space with atmospheric perspective o Shortening subjects with foreshortening, Compound forms, Ratio and proportion, Dividing a circle, geometry and Isometric.

Unit 3: Introduction To Orthographic Projections, Plan view, Front view, Side/ end view. The cube and cubics projection. Constructing Shadows and shades in isometric projections

Unit 4: Basics Of Rendering in Jewellery Designing, Metal surface rendering, Flat surface rendering, Concave, Convex. Form/ Surface Introduction Project, Stone Set Ring Introduction Project, Applied Perspective And Technical Drawing, Ring, Brooch, Necklace, Earring. Rendering Of Different Surfaces, Metal surface rendering, Flat surface rendering, Concave, Convex. Perspective And Technical Drawing, Findings/ fittings, Free hand sketching, Scale drawing/ measured drawing, Orthographic Projections, Stone Layout methods, Complex forms. Working to Given Time Limit, Introduction, Overall design brief Specific requirements.

Unit 5: Competition Style Presentations, Introduction to Clarity of information, Overall impact, Composition, Colour, Context, Standard format, Technical information, Exercise using example design, Competition entry.

Reference Books

1. Drawing for Jewelers: Master Class in Professional Design, Maria Josep Forcadell Berenguer, Josep Asunción Pastor, Schiffer Pub Limited, 2012
2. Techniques of Jewelry Illustration and Color Rendering, Adolfo Mattiello, Judith Evans, Cy Cylkowski, DuMatt Corporation, 1995

Core Paper IV : Metallurgy and Surface Sciences

Program indicative Content:

Unit 1: Classification Of Metals.: Metals in Jewelry Making;. Ferrous vs. Non-Ferrous Metals Base vs. Noble Metals. Precious vs. Non-Precious Metal. Common Metals in Jewelry Making.

Unit 2: Precious Metals (Gold, Silver & Platinum) And Base Metal (Copper), Availability, Ores and Extraction & purification process, Chemical & Physical properties, Uses.

Unit 3: Metallurgy Of Karat Gold Alloys, Three states of matter, Types of solids with example, Crystal structures, Cartage control, Alloying behaviour, Characteristics of different alloys, Physical & Mechanical properties, Five metals alloy, Terms connected with equilibrium diagram, Solid and substitutional solid solution, Solidification of alloys, Color triangle, Phase diagrams of different alloy compositions, Equilibrium diagram of gold - silver binary alloy system, Equilibrium diagram of gold - copper binary alloy system.

Unit 4: Annealing, Definition of Annealing, Hot working, Cold working, Melting- Equipments, Procedures, Consumables, Precautions, Usage of Pre-alloys.

Unit 5: White Gold, Palladium based white gold, Nickel based white gold, Comparative study, Equilibrium diagram of silver - copper binary alloy system.

Reference Books

1. Materials Science and Engineering : An Introduction by W.D. Callister,
2. Introduction to Materials Science for Engineers by James F. Shackelford

Allied Paper 3- Computer Lab 2D(Practical)

Unit 1 – Photoshop Techniques, Controlling colours and gradients, Selection techniques for isolating jewellery, Global image controls, Spot fixes on images (Retouching), Opacity, Layer effects and filters, Adding drop shadows to a cut out ring image, Making backgrounds for layouts, Creating a reflection on a surface, Image sizing and resolution controls, Image formats and saving.

Unit 2 – Illustrator Techniques 1, Introduction to Adobe Illustrator, Navigation and controls, Building Basic Shapes, Controlling shapes with selection and direct selection Colours, Strokes and Fills.

Unit 3 - Illustrator Techniques 2, Controlling shading with gradients, Stacked Objects and Groups, Pathfinder and Align tools, Using the Pen Tool, Using Pattern Brushes to build milligrain and chains, Controlling layers, Using guides to build 2 and 3 way orthographic drawings, Exporting vector lines to laser engraving or 3D CAD, Building a gemstone using precision placement of vector lines.

Unit 4 – Combined Photoshop/Illustrator Techniques 1, Cleaning up scanned hand drawings in Photoshop, Importing and tracing hand drawings in Illustrator, Importing and managing photos in Illustrator, Converting photos to vector lines with Livetrace.

Unit 5 - Combined Photoshop/Illustrator Techniques 2, Adding texture to Illustrator drawings with clipping masks, Advanced shading in Illustrator with Gradient Meshes, Importing Illustrator designs into Photoshop with Smart Objects, Digital painting techniques, Converting orthographic drawings into isometric drawings in Illustrator.

Reference Books

- 1. Processing: A Programming Handbook for Visual Designers, Second Edition,**
Casey Reas and Ben Fry.

Skill based Subject-1 - Design & manufacture LAB – 1 (Practical)

Programme indicative Content:

Unit 1: Exercises on -- Rolling mill, Drilling machine, Buffing machine, Bangle sizing machine, Polishing machine like, Drum polisher, Magnetic polisher. Holding tools, Direct striking tools, Indirect striking tools, Compression tools, Cutting tools, Metal removal tools, Torsion tools, Mechanized rotary motion power tools, Soldering and heating area.

Unit 2 : Melting, Wire rolling and drawing exercises, Annealing, Pickling, Fusing, Fabrication, Soldering, Repair works.

Unit 3:Basic Techniques (Goldsmithing Basic), measuring and marking out , Steel ruler, Divider, Outside caliper, Inside caliper, Vernier calipers, Center punch, Scriber, Try square, Cutting, Drilling, Filing, Straight filing, Square filing, Round filing, Arch filing, T joint, T and U-joint, L-joint, Heating , Soldering, Sawing, Straight sawing, Arch sawing, Zig zag

sawing, Round sawing, Square sawing, Step sawing, Birds and animals design sawing, English and Kannada design sawing.

Unit 4: Technical Exercises- Basic broach pin and catch, Wire work (chain making) 3” of 6 types , Use of different shape draw plate, Drawing readymade chain, Use of grooved rolling mill, Simple dome earring, Simple earring using all techniques.

Unit 5: Practical Techniques – Engraving, Explanation with different graver Square, Round, Octagonal, Flat, Oval, Knife, Liner, Technical Exercises- Simple bezel collet making , Simple prong collet making, Breakdown of the component required, Manufacture of each component, Material to be used, Assembly procedure, Finishing.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Semester 4

Core Practical V : Jewellery Design Concept 2

Programme indicative Content:

Unit 1: Stone Set Ring Introduction Project, Designing Of Different Types Of Ladies Rings. Engagement Rings. Anniversary Rings. Marriage Rings. Fancy Rings.

Unit 2: Designing Of Different Types of Gents Rings. Theme of the Design. Mood board, Concept of the Design. Type of ornament. Metal weight. Stone type. Stone shapes. Stone colour. No of stones, Stone size, Stone weight, Different type of Stone setting.

Unit 3: Designing Of Different Types Of Gents Pendants. Theme of the Design. /Mood board, Concept of the Design, Type of ornament. Metal weight, Stone type, Stone shapes, Stone colour, No of stones, Stone size, and Stone weight. Different type of Stone setting,

Unit 4: Designing Of Different Types Of Bangles. Traditional Style bangles. Modern Style bangles. Theme of the Design. Concept of the Design. Type of ornament. Metal Weight, Stone type. Stone shapes. Stone colour. No of stones. Stone size. Stone weight.

Unit 5: Designing Of Different Types Of Bracelet. Fixed bracelet, Unfixed bracelet, Theme of the Design. Concept of the Design. Type of ornament. Metal Weight, Stone type, Stone shapes. Stone colour. No of stones. Stone size. Stone weight.

Reference Books

1. Principles of form and design- Wueius Wong
2. The Decoupage source book- Innesjocasta & Walton Stewart
3. Shapes and Colours – Atsa Lin Mike Co., Bradbury, Lynne
4. Traditional Jewellery of India – OppiUntacht 1997

Core Paper V : Design & Manufacture 2

Programme indicative Content:

Unit 1: Goldsmithing Advanced, Advanced filing & sawing exercises, Step joint, Dovetail joint, Round joint, English and Kannada letter's model filing, Hexagon joint, Square sawing, Step sawing, Birds and animals design sawing, English and Kannada letter's model sawing, Master model making techniques, Gold Smithing Exercises- Wire Rolling & Sheet Making, Filigree making, Fusing & Forging, Wire drawing, Shaping & fabrication, Stamping, Soldering, Introduction, Basic requirements, Types, Preparations, Importance of non-cadmium solders,

Unit 2: Latest development in soldering process, Soldering practices, Basic techniques, Precautions, Consumables, Requirement For Written Technical File, Practical Techniques- Polishing / Finishing, Stamping / Pressing.

Unit 3: Enamelling Introduction, Working from a Technical Drawing, Applied Project Work, and Stone set ring, Stone setting types introduction, Characteristic/ use of each setting, Methods of settings.

Unit 4: Lost Wax Investment Casting Process, Introduction to metal casting in general, Sand casting, Lost wax casting, Demonstration of the lost wax casting process, Wax Modeling, Understand and making a master, Types of waxes, Shapes of waxes, Repairs of waxes, Presetting, Sprue design and tree making, Enameling, Use of hot enamelling, Firing sequence.

Unit 5: Intermediate Stone Setting, Prong setting, Bazel setting, Multi Media (Ceramics, Glass Etc.), Study the different markets, Designing and manufacturing a piece.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Core Paper VI : History of Jewellery Design

Programme indicative Content :

Unit 1: Introduction: The Meaning Of "Jewel" .Prehistoricaljewellery: from 82.000 BC to the discovery of metals, The ancient jewelry in the Middle East and East Mediterranean: 5.000-1.400 BC (Varna, Sumerians, Egypt, Minoan culture).

Unit 2:Phoenician, Etruscan jewelry, Ancient Roman Empire jewellery, Greek jewellery Celtic Europe. Byzantine and Nomads jewelry, Medieval European jewelry (VIII -XIV century), Renaissance jewelry (XV -XVI century), Baroque jewelry (XVII century)

Unit 3 : American native jewelry: South and North, XVIII century jewelry in European culture, XIX century jewelry in European culture, African andAsianjewelery.

Unit 4:IndianJewellery History, - Indus valley civilization – beads, - Trade in gemstones Ancient India – styles, design & techniques, - South India, - Mughal period

Unit 5 :Jewellery For Men And Women, Symbolism In Indian Jewellery, Design In The Indian Context

Reference Books

1. Drawing for Jewelers: Master Class in Professional Design, Maria Josep ForcadellBerenguer, Josep Asunción Pastor, Schiffer Pub Limited, 2012
2. Techniques of Jewelry Illustration and Color Rendering, Adolfo Mattiello, Judith Evans, CyCylkowski, DuMatt Corporation, 1995

Core Paper VII : Photography

Programme indicative Content :

Unit 1:The basic of the photography, Basic of vocabulary of photography. Basic equipment. History of the photography. Aragnetic photography, digital photography. The formats and the process

Unit 2:Using a camera – the right format, correction of the exposure, the balance of the white. The ISO, the photo histogram.

Unit 3:Using camera – exposure and depth of the field, fuzziness and clarity.Using a camera – lighting, adjust focus and other camera settings.

Unit 4:The studio photography, Management of a studio, initiation to studio shooting. Experimentation of different technics and different situations . The good habits in studio management.

Unit 5: Understand, utilize and analyze a photo picture. Individual and group analyse. Quality, format, color. The importance of the editing exercise on Photoshop

Reference Books

1. Digital Photography: A Basic Manual; Henry Horenstein, Allison Carroll
2. Mastering Digital Photography: Jason Youn's Essential Guide to Understanding the Art & Science of Aperture, Shutter, Exposure, Light, & Composition; Jason Youn

AliiedPaper 4 - Computer Lab 3D-1(Practical)

Unit 1: Introduction To 3D visualization. The software Rhino, The Rhino Workspace, Viewport Navigation for 2-Dimensional Work. basic exercises and examples.

Unit 2: The Basic Shapes, Anatomy of a Line and a Polyline, Anatomy of a Circle. Exercise and experimentation of line, vectors. geometry of a basic shape and manipulation.

Unit 3: Modeling Aids, Grid Snap mode, Ortho Mode, Object Snap ("Osnap"), Analysis Commands - Measuring Length, Distance, Radius, Diameter, Angle.

Unit 4: Creating and Editing Drawings, Move and Copy Commands, Picture Frame Command - Placing and Tracing a Design Image, Mirror and Rotate Commands - Creating a Design with the Leaf Motif, Trim and Split Commands.

Unit 5: Technical Drawings, Simple Stones and Prongs - Creating with Circles, Simple Stones and Prongs – Layers, Technical Drawing - Pearl Ring, Polygon - Rectangle - Simple ring bands, More Shapes - the Star and the Spiral, Star - Creating Stars in Rhino, Flat Spiral

Reference Books

1. **Processing: A Programming Handbook for Visual Designers, Second Edition,** Casey Reas and Ben Fry.

Skill based Subject-2 - Design & Manufacture LAB 2(Practical)

Programme indicative Content:

Unit 1: Gold Smithing Exercises- Wire Rolling & Sheet Making, Filigree making, Fusing & Forging, Wire drawing, Shaping & fabrication, Stamping, Soldering, Introduction, Basic requirements, Types, Preparations, Importance of non-cadmium solders,

Unit 2: Latest development in soldering process, Soldering practices, Basic techniques.

Unit 3: Enamelling Introduction, Working from a Technical Drawing, Applied Project Work, and Stone set ring, Stone setting types introduction, Characteristic/ use of each setting, Methods of settings.

Unit 4: Casting Process, Introduction to metal casting in general, Sand casting, Lost wax casting, Demonstration of the lost wax casting process, Wax Modeling, Understand and making a master, Types of waxes, Shapes of waxes, Repairs of waxes, Presetting, Sprue design and tree making.

Unit 5: Intermediate Stone Setting, Prong setting, Bazel setting, Multi Media (Ceramics, Glass Etc.), Study the different markets, Designing and manufacturing a piece.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Semester 5

Core Practical VI : Jewellery Design Concept 3

Programme indicative Content :

Unit 1: Designing Of Different Types Theme Based Necklace Sets. Peacock Concept. Butterfly Concept. Leaf Concept. Floral concept. Exercises with specific drawing techniques

Unit 2: Designing Of Modern Necklace Sets. Theme of the Design. Mood board, Concept of the Design, Type of ornament, Metal weight, Stone type, Stone shapes, Stone colour, No of stones, Stone size, Stone weight, Different type of Stone setting.

Unit 3: Designing Of Bridal Necklace Sets. Theme of the Design. Mood board, Concept of the Design. Type of ornament. Metal weight. Stone type, Stone shapes. Stone colour. No of stones. Stone size. Stone weight. Different type of Stone setting.

Unit 4: Designing Of Kundan Necklace Sets, Theme of the Design. Concept of the Design. Type of ornament. Metal weight. Stone type, Stone shapes.

Unit 5: Stone colour. No of stones. Stone size. Stone weight. Different type of Stone setting, Analyze of the settings. Setting according to the stone. Quality of the settings.

Reference Books

1. Principles of form and design- Wueius Wong
2. The Decoupage source book- Innes jocasta & Walton Stewart
3. Shapes and Colours – Atsa Lin Mike Co., Bradbury, Lynne
4. Traditional Jewellery of India – Oppi Untacht 1997

Core Paper VIII : Design & Manufacture 3

Programme indicative Content :

Unit 1:WAX MASTER 1, Reading the technical drawing, Required information and tolerance, Drafting and layout of the complex form, Sequence of working, Use of special equipments, Checking measurements and angles, Carving various 3d forms (geometric and flowing), Metal to be used, Finishing of the master.

Unit 2: Wax Master 2, Sizing and shrinkage issue for fitting parts, Sprue placement, Thickness/ gauge consideration, Detailing on master, Investment, Selection of mould frame, Packing, Vulcanizing, Cutting of rubber, Injection, Casting

Unit 3: Polishing And Finishing , Use of files for finishing, Emery paper grades and proper use, Polishing stick/form, Polishing materials (leather, strings, cloth etc.), Polishing compounds (liquid and solid),

Unit 4:Cleaning methods/ material (detergent, pumice, brushes etc.), Other hand finishes (scratch brush etc.). Industrial Finishing /Plating, Grinding, Filing, Sanding, Sprue cutting, Cleaning .

Unit 5: Stripping and bombing, Barreling technique and media, Burnishing technique, Industrial polishing and buffing technique, Steam cleaning, Lapping.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Core Practical VII : Computer Lab 3D -2)

Unit 1:Rhino Expert, Creating with the Array Commands, Polar Array Command Using History - Designing a Circular Pattern, Polar Array Command - Arraying Circles around a Square, Array along a Curve Command - Arraying Stones around an Oval, Arraying Along a, Freeform Curve.

Unit 2:Scaling, Dimensional and 2-Dimensional Scaling,. Experimentation and importance of the scaling.The role of the scaling in design.Exercice and experimentation.

Unit 3:Rope Twist Necklace using History, Quick Rope Twist Necklace Layout with History. Arcs,Technical Drawing - Bombe Ring,

Unit 4:Point Objects, Point Objects - Points for Reference and the Division of Curves, Technical Drawing - Necklace Layout, Technical ,rawing More Advanced Projects, Technical

Drawing - Band Ring with Bezel Set, Cabochon, Bounding Box, Watch Dial, Creating a Simple Floral Motif.

Unit 5: Technical Drawing Resources, Dimensions - Creating and Working with Dimension Styles, Print Width & Line types for 2D Drawings, Printing 2D Drawings - Simple Printing of 2-dimensional Drawings.

Reference Books

1. **Processing: A Programming Handbook for Visual Designers, Second Edition,** Casey Reas and Ben Fry.

Core Paper IX : Introduction to Gemology

Programme indicative Content :

Unit 1: Introduction, Earth science and continental theory, Types of rocks, minerals and gem minerals, Beauty, durability and rarity of gemstones, World occurrence of gem, minerals and their Specialties, INSTRUMENTS, Dichroscope, Principle, Construction and working, Isotropic and Anisotropic stones, Dichroism and trichroism, Polariscope, Principle, Construction and working, S.R., D.R., A.G.G. & A.D.R stone, Optic character of gemstone, Uniaxial and Biaxial optic signs, Use of konoscope, Refractometer, Critical angle of gemstone, Total internal reflection in gems, Refractive index determination, Birefringence and optic sign, Spot method for cabochons and carvings, Spectroscope, absorption of light, Dispersion in gemstones, Working & use of spectroscope, Typical spectrums of certain gem stone.

Unit 2: OPTICAL PROPERTIES, OPTICS, Practical with phenomenon, OPTIC NATURE, Single and double refraction, Optic axis cause of colour in gemstones, PHENOMENON IN GEMSTONES, Cat's eye, Asterism, Play of colours, Sheen, Averagescence, Pleochroism, Metamerism, Iridescence, Luster and transparency,

Unit 3: PHYSICAL PROPERTIES OF GEMSTONES, Hardness - hardness scale, differential Hardness, Cleavage, Parting, Toughness, Specific gravity, Hydrostatic and heavy liquids method, CRYSTALLOGRAPHY OF GEMSTONES, Seven-crystal system, Crystal axis, Elements of symmetry, crystal forms and habits, Types of twinned crystals, Surface marking.

Unit 4: IDENTIFICATION OF ROUGH CRYSTALS BY OBSERVING VARIOUS GEMSTONES COURNDUMS, Rubies and Sapphires, BERYL GROUP, Emerald, Aquamarines etc. QUARTZ GROUP, Various types of quartz crystalline and cryptocrystalline, GARNET AND FELDSPAR GROUPS, TOURMALINE, TOPAZ, PERIDOT, SYNTHESIS OF COLOURSTONES AND SYNTHESIS OF DIAMONDS IDENTIFICATION OF SYNTHETIC FLAME-FUSION GEMSTONE IDENTIFICATION OF FLUX AND HYDROTHERMAL SYNTHETICS ORGANIC GEMSTONE, Pearl, Ivory, Amber, Coral, Jet.

Unit 5: CHRYSOBERYLS, Cat's, Alexandrite, Spinel, Zircon, MINOR STONE, Turquoise Lapid, Malachite diopside, Enstatite, IOLITE, TANZANITE, ANDALUSIT, APATITE, SPHENE, SPODUMINE, SCAPOLITE, KYANITE, FLUORITE, GYPSUM, ETC, RARE STONES

Reference Books

1. Gem testing, 10th Edition, B.W.Anderson
2. Gem stones of the world, Walter Schumann
3. Practical Gemmology, Robert Webster
4. Diamond Grading ABC, VerenaPagel, Theison G.G.F.G.A
5. Handbook of gem stones, Cally Hall.

Core Paper X : Visual Communication

Programme indicative Content :

Unit 1:Introduction To Effective Visual Communication, Nature, process, function. Communication as fundamental human process.Different theories of communication.From the discourse to the semiotic. Develop A Project, Determinate and design the right layout to develop a project,Structure the presentation, Size, Shape, Support. Work on indesign, experimentation of visuals templates.

Unit 2:Tools, Argue the choices, and explain his conviction, Building solution with validations steps.Develop the personal image. The personal creativity and the visual communication . Develop A Concept Through A Visual Story, Mood boards, Argumentation. How making a efficient Mood board: the visual, the expectations. The mood boards for what for who ?

Unit 3:Integrate And Design The Visual Identity Of Your Brand (According To Your Story). Process and development of a brand. Set up a final Identity of your Brand : Logo, brochure , visuals ... Scenography / merchandising, To develop the right visual merchandising/ display. What Is merchandising. The different kinds of merchandising.Exemple and analyze in the industry.

Unit 4:To set up an innovative Scenography, Introduction to Display, Basic Display Arrangements. The different kind of display. The product vs display .the display and jewellery. Applied Design.Manipulation of a 3D space. The different possibilities :Positive and Negative Space, Light, texture ,color, materials

Unit 5:Design Elements used in visual display ,Color, Theory. How to create new elements and stories.Psychology. Visual display according the client targeted, according to specific events, specific products. Quality and relevance of a visual display. What to do what to avoid. Examples of windows display. the role of the scenography in the Psychological approach.

Reference Books

1. Visual Methodologies: An Introduction to the Interpretation of Visual Materials by Gillian Rose
2. Essentials of Visual Communication by Bo Bergström

Skill based Subject-3 - Design & Manufacture LAB 3(Practical)

Programme indicative Content :

Unit 1:WAX MASTER 1, Reading the technical drawing, Carving various 3d forms (geometric and flowing), Metal to be used, Finishing of the master.

Unit 2: Wax Master 2, Sizing and shrinkage issue for fitting parts, Sprue placement, Thickness/ gauge consideration, Detailing on master, Investment, Selection of mould frame, Packing, Vulcanizing, Cutting of rubber, Injection, Casting

Unit 3: Polishing And Finishing , Use of files for finishing, Emery paper grades and proper use, Polishing stick/form, Polishing materials (leather, strings, cloth etc.), Polishing compounds (liquid and solid),

Unit 4:Cleaning methods/ material (detergent, pumice, brushes etc.), Other hand finishes (scratch brush etc.). Industrial Finishing /Plating, Grinding, Filing, Sanding, Sprue cutting, Cleaning .

Unit 5: Stripping and bombing, Barreling technique and media, Burnishing technique, Industrial polishing and buffing technique, Steam cleaning, Lapping.

Reference Books

1. Making Metal Jewelry: Projects, Techniques, Inspiration: Joanna Gollberg

Semester :6

Core Paper XI : Diamond Grading

Programme indicative Content :

Unit1:INTRODUCTION, Formation of diamonds, Occurrence of diamonds and types of mines, Properties of diamonds Famous diamonds, Diamond crystals and morphology 27,

Unit 2:Importance of diamond grading and certification, Inclusions and Blemishes in diamonds, International clarity grading and plotting, Brilliant cut. CLARITY GRADING, Identification, International grading,

Unit 3:CUT GRADING, Proportions of diamonds, Various polish and symmetry factors, Overall cut assessment, Heart & Arrow cut, Ideal scope – light leakage, Fancy cut and their evaluation

Unit 4:COLOUR GRADING, Cause of colour in diamonds, Type of diamonds colours, Grading Fancy colours, Fluorescence colour, Factor affecting colour judgment, CARAT GRADING, Various way of separating diamonds by size – market terms, Use of sieve size, Use of Gauge, Weight estimation,

Unit 5: IDENTIFICATION OF IMITATIONS, Cubic Zirconia's, Zircon, White sapphire, Synthetic moissanite, IDENTIFICATION OF SYNTHETIC DIAMONDS, MARKETING OF DIAMONDS.

Reference Books

1. Drawing for Jewelers: Master Class in Professional Design, Maria Josep Forcadell Berenguer, Josep Asunción Pastor, Schiffer Pub Limited, 2012
2. Techniques of Jewelry Illustration and Color Rendering, Adolfo Mattiello, Judith Evans, CyCylkowski, DuMatt Corporation, 1995

Core Paper XII : Marketing & Merchandising Management

Programme indicative Content :

Unit 1: What is jewelry Marketing & Merchandising? Specificities of Fashion & jewelry Marketing & Retailing Merchandising, Jobs of the jewelry Field, Sectors of the jewelry Field (original & extensions),

Unit 2: Districts of the jewelry Field field in Paris, brands, New concepts of the jewelry Field, Luxury & fashion Marketing Fundamentals, Segmentation, Target and positioning, Consumer's attitudes and behaviors,

Unit 3: Types of merchandising, concepts, merchandise planning, sampling- Importance, counter sample. Retail merchandiser, concept, quick response,

Unit 4: Just –in-Time, merchandiser calendar, trend analysis, forecast analysis, concepts of apparel product line, planning, directing, coordinating and controlling,

Unit 5: Economy and Technology of the Fashion & luxury Field, Economical background of the Fashion & luxury field, The place of developed and developing countries in the sourcing process of jewelry and costume jewelry

Reference Books

1. Laura L Bliss, Study Guide Visual Merchandising and Display III edition, 1995- Fairchild Publications.
2. Castelino. M. Fashion Kaleidoscope, Rupa & Co. 1994.
3. Gibson. G. Vedomani, Retail Management, Jaico Publishing House, Bangalore
4. Elaine Stone, The Dynamics of Fashion, Fair Child Publication
5. Brenda Sternquist, International Retailing, Fairchild Publication, New York
6. Martin. M. Pegler, Store Window No.14, No 12, Visual Reference Publishers, New York

Core Paper XIII : Entrepreneurship

Programme indicative Content :

Unit 1: Introduction to entrepreneurship, development of entrepreneurship, role of entrepreneurs in development of apparel and fashion industry, entrepreneurship with reference to fashion and apparel industry in India.

Unit 2: Entrepreneurial support by state, central financial institutions, organizations. Government policies with reference to textile and apparel industry

Unit 3: Business planning- Starting a new venture related to apparel industry, essentials of a successful centre. Formalities of opening a firm, the status of firm, Individual proprietor/partnership/ Pvt. limited company & public Ltd company, bank formalities, term loan, working capital, project financing..

Unit 4: Location & plant layout-factors influencing plant location, building, structure, lighting, Ventilation, material handling, availability of labour, material management and transportation. Plant layout, ergonomics safety & security to be considered while planning the layout.

Unit 5: Industrial sickness and remedies, tax planning, VAT, Patent Rules, Factory Act, Minimum wages, knowledge of exemptions & deductions. Environmental considerations and social responsibilities.

Reference Books

1. The dynamics of entrepreneurial dev& management: Vasanth Desai, 6th edition Himalaya publish house.
2. Fundamentals of entrepreneurship – Hnandan. PHI learning Pvt Ltd.
3. Entrepreneurship Development & Management :M.B.ShuklaKitasMahal
4. Entrepreneurship tool kit :Harward Business School press
5. Entrepreneurship Development :Dr.S.S.KhankaS.Chand& co ltd
6. Entrepreneurship strecticgics resources 3rd edition: Monc.J..Dollinger
7. Fundamentals & Entrepreneurship: 2009: SangramKeshariMohanti PHI learning.

Design Project(Report)

Programme indicative Content :

Unit 1: Selection of topic

Unit 2: Research work

Unit 3: Concentration on topic and design conceptualization

Unit 4: Selection of designs of gathering raw materials

Unit 5: Manufacture designs and selected, Submission of research booklet, Submission of design of and manufacturing pieces

Skill based Subject - 4 – Diamond Grading Lab (Practical)

Programme indicative Content:

Unit1: Importance of diamond grading and certification, Inclusions and Blemishes in diamonds, International clarity grading and plotting, Brilliant cut.

Unit 2: CLARITY GRADING, Identification, International grading,

Unit 3: CUT GRADING, Proportions of diamonds, various polish and symmetry factors, overall cut assessment, Heart & Arrow cut, Ideal scope – light leakage, Fancy cut and their evaluation

Unit 4: COLOUR GRADING, Cause of colour in diamonds, Type of diamonds colours, Grading Fancy colours, Fluorescence colour, Factor affecting colour judgment, CARAT GRADING, Various way of separating diamonds by size – market terms, Use of sieve size, Use of Gauge, Weight estimation,

Unit 5: IDENTIFICATION OF IMITATIONS, Cubic Zirconia's, Zircon, White sapphire, Synthetic moissanite, IDENTIFICATION OF SYNTHETIC DIAMONDS, MARKETING OF DIAMONDS.

Reference Books

3. Drawing for Jewelers: Master Class in Professional Design, Maria Josep Forcadell Berenguer, Josep Asunción Pastor, Schiffer Pub Limited, 2012
4. Techniques of Jewelry Illustration and Color Rendering, Adolfo Mattiello, Judith Evans, CyCylkowski, DuMatt Corporation, 1995