

# **INTERNATIONAL COLLEGE FOR GIRLS**

**SFS, GURUKUL MARG, MANSAROVAR, JAIPUR**

# **JEWELLERY DESIGN & TECHNOLOGY**

---

**COURSES OF STUDY  
FOR**

**B.A./B.SC./B.COM.  
JEWELLERY DESIGN & TECHNOLOGY  
EXAMINATION**

**I Semester Examination November 2009  
II Semester Examination April 2010  
III Semester Examination November 2010  
IV Semester Examination April 2011  
V Semester Examination November 2011  
VI Semester Examination April 2012**

**Syllabus applicable for the students seeking admission to the B.A./B.Sc./B.Com.  
Jewellery Design & Technology Course in the academic year 2009-2012**



## ***INTERNATIONAL COLLEGE FOR GIRLS (AUTONOMOUS)***

### **JEWELLERY DESIGN & TECHNOLOGY**

#### **ICG- A HERITAGE OF VISION- A LEGACY OF INNOVATION**

International College for Girls, the only English medium PG college of Rajasthan accredited A+ by the National Assessment and Accreditation Council. ICG has made a mark in the educational environs of Rajasthan having just completed a decade of educational excellence. The ICG, though a new concept, has been firmly rooted and verdantly bloomed in our rich Indian culture with a laid emphasis on scientific temper and progressive outlook. Having taken off in 1995 with a faith of dreams and fire of will, the college now basks in the golden hues of its unparalleled distinction through perseverance of students and the grit of its teachers.

#### **INTRODUCTION**

The **Jewellery design & Technology** course is being offered as an elective at undergraduate level in Arts/Science/ Commerce, aims to transform the students into a unique package combining creativity, entrepreneurship, technology and market awareness. The main focus is to benefit the industry at large by creating professionals and entrepreneurs. The course has been planned in a very precise and systematic manner, assimilating all the aspects of design, entrepreneurship, soft skills developments & manufacturing technology.. The study program is a unique blend of academics, creativity and complete packaging of students.

This course is about creating jewellery of quality in concept and realisation with in a duration of six semesters. It focuses on the development of practical skills and the expansion of design ideas. It is a project-based, with many live industry projects which provide insight of professional jewellery contexts. These are supported by lectures, practicals, seminars, demonstrations, workshops, exhibitions, field study visits, projects etc. The course develops cultural, business and professional awareness as well as communication skills. Work becomes increasingly self-directed through the course.

#### **Objectives**

This Course is designed to equip the students with the techniques of Jewellery Designing. The students shall acquire working knowledge of aesthetic and practical aspects of the field. The students of this course shall learn to illustrate shapes and forms of metals, faceted and cabochon stones and textures of jewellery surfaces. They will also

learn to create designs for men, women and children according to the popular trends. They will learn to design according to the particular tastes and demands of different markets. They shall be taught the technical and perspective drawings of various ornaments. After completion of the course, the students shall be eligible to work as a jewellery designer or as an entrepreneur in the jewellery industry. They will also learn the computer as an aid to designing. They will come to know about the latest trends and the famous names in Jewellery through Jewellery books, periodicals and the internet.

## **Career prospects**

Graduates with Jewellery Design & Technology as one of the electives establish themselves as designers/makers, work in the jewellery industry as producers or retailers, in small group practices or work in designer fashion house or export house. Many go on to be design entrepreneurs, freelance designers and consultants.

## **Portfolio advice**

The students portfolio should demonstrate design development, whether for a college project or in their personal work. By design development, we mean designs and design ideas that have originated through their own experience and visual research and progressed through logical stages to a finished design solution. This could be two-dimensional work or made objects.

It is important that the design work should reflect and demonstrate the creative thinking, initiative and personal commitment to a particular project. The student should be able to demonstrate good drawing, observational, analytical and design development skills. They should also demonstrate that they have a strong sense of three-dimensional form and sensitivity to materials. Whenever possible, a collection of live drawing work will help the panel of examiners to examine and grade their work properly. Some jewellery-making experience is essential. The students should include examples of jewellery they have made in their portfolio.

## **CLASS SCHEDULE AND REGULARITY**

- Irregularity hampers the learning process and understanding of the subject. Minimum 75 percent attendance is required to appear in the final examination.
- The classes shall be conducted as per time-table prescribed by the college.
- The students will be sent for internship during summer vacations after IV Semester.

## **TEACHING SCHEDULE**

The Teaching Schedule will include theory and lectures and practicals as per timetable prescribed by the college

## **PEDAGOGICAL STRATEGIES**

Apart from class activities and assignments, students shall be given opportunities to attend exhibitions and fashion shows, and interact with senior professionals through seminars, symposia and other pedagogical methods on the areas of topical interest from time to time.

The students shall be visiting Jewellery factories and manufacturers during the session. The attendance to the field trips shall be compulsory. In Internship Programmes the students will be required to complete design projects given by the experts from the Jewellery industry. This will help them to gain a practical knowledge of designing. A factory visit will be scheduled every year.

## **PRACTICALS AND ASSIGNMENTS**

- The students shall learn techniques to illustrate and render jewellery designs.
- They shall learn to design jewellery that is easy to manufacture, attractive, and saleable.
- They shall learn to design jewellery using different shapes, colours, metals, motifs and stones.
- The students shall submit assignments on time. All assignments shall be evaluated regularly.
- Required number of submissions shall be given by the students for the final evaluation.

## **EVALUATION:**

The students opting for Jewellery Design & Technology as an elective in Arts/Science/Commerce will be evaluated through Continuous Assessment (30% weightage) and Semester End Examination at the end of each semester (70% Weightage). The continuous assessment shall be based on Tests, Home assignments, Classroom interaction and Attendance, whereas the semester end exam will be a written examination for theory papers and evaluation of practicals by a Panel of examiners.

## INTERNATIONAL COLLEGE FOR GIRLS

### U.G. Programme Six Semesters

Session 2008-09

**Proposed Schedule for Jewellery Design & Technology teaching is:**

|                 | <b>Semester</b> | <b>Theory<br/>Hrs./Week</b> | <b>Credit</b> | <b>Practical<br/>Hrs./Week</b> | <b>Credit</b> | <b>Total</b>                |
|-----------------|-----------------|-----------------------------|---------------|--------------------------------|---------------|-----------------------------|
| <b>I year</b>   | I               | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |
|                 | II              | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |
| <b>II year</b>  | III             | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |
|                 | IV              | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |
| <b>III year</b> | V               | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |
|                 | VI              | 3<br>45 hrs/sem.            | 3             | 7<br>105 hrs/sem.              | 5             | 10 hrs/week<br>150 hrs/sem. |

**COURSE STRUCTURE**  
**Jewellery Design & Technology**  
**Six Semester Programme**

| Semester   | Paper No. | Paper Code | Nomenclature   | Contact Hours/ Sem | Contact Hours /Week | Credits |
|------------|-----------|------------|--|--------------------|---------------------|---------|
| <b>I</b>   | I         | TJD – 101  | Fundamentals of Jewellery Design & Gemology (Theory)         | 45                 | 3                   | 3       |
|            | II        | TJD – 103  | Drawing & Rendering (Metal Forms & Gemstones ) (Practical I) | 45                 | 3                   | 2       |
|            | III       | TJD – 104  | Theme Based Designing (Practical II)                         | 60                 | 4                   | 3       |
| <b>II</b>  | I         | TJD – 201  | History of Jewellery (Theory )                               | 45                 | 3                   | 3       |
|            | II        | TJD – 202  | Cost based Designing (Practical I)                           | 45                 | 3                   | 2       |
|            | III       | TJD – 203  | Historical Designing (Practical II)                          | 60                 | 4                   | 3       |
| <b>III</b> | I         | TJD – 301  | Indian & International Jewellery Markets (Theory)            | 45                 | 3                   | 3       |
|            | II        | TJD – 302  | Orthographic Views (Practical I)                             | 45                 | 3                   | 2       |
|            | III       | TJD – 303  | Market Oriented Designing (Practical II)                     | 60                 | 4                   | 3       |
| <b>IV</b>  | I         | TJD – 401  | Diamond Grading & Sorting (Theory)                           | 45                 | 3                   | 3       |
|            | II        | TJD – 402  | Men's & Youth's Jewellery (Practical I)                      | 45                 | 3                   | 2       |
|            | III       | TJD – 403  | Computer Aided Designing (Practical II)                      | 60                 | 4                   | 3       |
| <b>V</b>   | I         | TJD – 501  | Manufacturing Process (Theory)                               | 45                 | 3                   | 3       |
|            | II        | TJD – 502  | Accessory Design (Practical I)                               | 45                 | 3                   | 2       |
|            | III       | TJD – 503  | Manufacturing Process (Practical II)                         | 60                 | 4                   | 3       |
| <b>VI</b>  | I         | TJD – 601  | Marketing, Advertisement & Brand Building (Theory)           | 45                 | 3                   | 3       |
|            | II        | TJD – 602  | Advance Computer Aided Designing (Jewel cad)(Practical I)    | 45                 | 3                   | 2       |
|            | III       | TJD – 603  | Projects & Summer internship reports (Practical II)          | 60                 | 4                   | 3       |

## INTERNATIONAL COLLEGE FOR GIRLS

### B.A./B.Com./B.Sc. Jewellery Design & Technology

#### Scheme of Examination

| <b>Scheme of Evaluation for Continuous Assessment<br/>(Theory)</b> |                   |                                  |                   |                                   |               |
|--|-------------------|----------------------------------|-------------------|-----------------------------------|---------------|
| <b>U.G.</b>  | <b>C.A.Test I</b> | <b>Home Assignment<br/>/Quiz</b> | <b>Attendance</b> | <b>Class Room<br/>Interaction</b> | <b>Total</b>  |
|  | <b>15 mks</b>     | <b>05 mks</b>                    | <b>05 mks</b>     | <b>05 mks</b>                     | <b>30 mks</b> |

| <b>Scheme of Evaluation for Continuous Assessment<br/>(Practical)</b> |                 |               |                                      |                   |               |
|---|-----------------|---------------|--------------------------------------|-------------------|---------------|
| <b>U.G.</b>   | <b>C.A.Test</b> | <b>File</b>   | <b>Viva-Voce/Lab<br/>Interaction</b> | <b>Attendance</b> | <b>Total</b>  |
|   | <b>10 mks</b>   | <b>10 mks</b> | <b>05 mks</b>                        | <b>5 mks</b>      | <b>30 mks</b> |

**Note :**

- Time duration of Internal tests will be 45 Minutes
- Time duration of SEE will be three hours for theory and four hours for practicals.
- Passing percentage in continuous assessment and semester end exam is 36 % individually.



## **Jewellery Design & Technology**

### **SEMESTER I**

#### **Paper –I : Fundamentals of Jewellery Design & Gemology (THEORY)**

**Code: TJD-101**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max. Marks: 100**

**(CA-30: SEE 70)**

#### **Objectives:**

- ❖ To familiarize the students with terminology related to Jewellery Designs .
- ❖ To provide comprehensive knowledge about Principles & Elements of designing
- ❖ To understand the Forms of metals, and Textures of jewellery surface
- ❖ To impart the knowledge of Gemology

#### **Course Contents**

- |  |               |
|--|---------------|
| <b>I. Study of Design :</b>  | <b>05 hrs</b> |
| • <b>Elements of Designing</b><br>Point, Line, Shape, Plane, Texture, Color, Pattern, Form and Space     |               |
| • <b>Principle of Designing</b><br>Balance, Rhythm, Harmony, Proportion, Order, Movement, & Compositions |               |
| <b>II. Jewellery designing :</b>   | <b>05 hrs</b> |
| • Jewellery Designing: an overview   |               |
| • Sources & Inspirations   |               |
| <b>III. Metal :</b>  | <b>15 hrs</b> |
| • Precious metals : Gold, Silver & Platinum  |               |
| • Characteristics/Properties and Classification of Metals  |               |
| • Metal Texture  |               |
| • Alloy  |               |
| <b>IV. Gemology :</b>  | <b>15 hrs</b> |
| • <b>Characteristics of Gem stones :</b>   |               |
| ○ Physical Properties of Gem Stones  |               |
| ○ Optical Properties of Gem Stones   |               |
| ○ Moh's scale of Hardness  |               |
| • <b>Classification and types</b>  |               |
| ○ Precious and Semi precious Gems  |               |
| • <b>Gems Stones: Shapes &amp; cuts</b>  |               |
| ○ Studying Different Cuts and Shapes of Stone  |               |
| <b>V. Gemstones setting :</b>  | <b>05 hrs</b> |
| • Study of Setting –Channel, Prong, Pave, Plate, Flush, Illusion, Invisible and Tension.                 |               |



**Essential Readings:-**

- 1) Jewellery Concept & Technology by Oppi Untracht
- 2) The Art of Jewellery Design by Elizabeth Olver
- 3) Gem Identification Made Easy by Antoinette C. Matlirs

**Books Recommended:**

- 1) The Jeweller's Directory of Shape and Form by Elizabeth Olver
- 2) Practical Gemology by Robert Webster
- 3) Gemstones of the world by Walter Schumann
- 4) Identification of Gemstones by Michael O'Donoghue
- 5) Gemology (2nd Edition) by Peter G. Read
- 6) Gem & Ornamental Materials of Organic Origin by Maggie Compbell Pedersen

**Semester I**  
**Drawing & Rendering (Metal Forms & Gem Stones)**  
**(Practical I)**

**Code: TJD-102**

**Credits: T 2**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objectives:**

- ❖ To understand basics of drawing and sketching
- ❖ To understand the Forms of metals and textures of jewellery surface
- ❖ To illustrate Faceted and Cabochon stones

**Course Contents**

- I. Basic Drawing and Sketching : 10 hrs**
- Hand Control Exercises
  - Freehand Sketching
  - Shading of Different Geometrical Shapes
- II. Drawing and Rendering Metals : 15 hrs**
- Rendering of different metals
- III. Drawing and Rendering Gem Stones : 15 hrs**
- Drawing of different Gem Stones
  - Size and Shapes of Gem Stones
  - Facets
  - Cabochons stones
- IV. Settings of Gem Stones : 05 hrs**
- Finishing and Enhancement of Designs using different Settings

**Essential Reading:-**

1. Techniques of Jewellery Illustration and Colour Rendering Design Source Book  
Jewellery by Adolfo Mattiello

**Books Recommended :**

1. The art & craft of Jewellery by Janet Fitch
2. Metal Work for Craftsmen by Emil F. Kronquist

# Semester I

## Theme Based Designing (Practical II)

Code: TJD-103

Credits: T 3

Periods/Week: 4

60 hrs

Max.Marks: 100

(CA-30: SEE 70)

### Objectives:

- ❖ To illustrate shapes of Jewellery
- ❖ To understand the geometric principles, articulation and application in natural and man made environment, analysis of form, geometry in art & development of motifs,

### Course Contents

#### I. Metal Decorations:

10 hrs

- Enameling
- Filigree
- Metal Textures & finishes

#### II. Designing Jewellery on a particular theme :

50 hrs

- **Development of Motif to Design Jewellery according to different Themes**
- **Brooches**
- **Pendant sets:**
  - Fancy pendants
  - Tanmaniya
- **Earrings:**
  - Studs
  - Long earring Chandelier
- **Rings:**
  - Flat band
  - Concave
  - Convex
  - Fancy rings
- **Bracelets & Bangles:**
  - Tennis bracelets
  - Stiff bracelets
  - Bangles
- **Anklets:**
  - Flexible
  - stiff
- **Necklaces:**
  - Choker ,Tapering & Party wear

### Essential Reading:-

1. Jewellery Technology by Diego Pinton

### Books Recommended:

1. Jewellery Design by Elizabeth Olver
2. The Creative Jeweller by Sharon Mcswiney
3. 1000 Jewelry Inspirations by Sandra Salamony
4. The Art of Jewellery Design: : by Elizabeth Oliver

**Semester II**  
**History of Jewellery (Theory)**

**Code: TJD-201**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objectives:**

- ❖ To impart an understanding of Professional and Historical contexts of Jewellery

**Course Contents**

- |  |               |
|--|---------------|
| <b>I. History of Ornamentation :</b>   | <b>05 hrs</b> |
| • Brief Introduction   |               |
| <br>   |               |
| <b>II. Study of historical Jewellery - India :</b>   | <b>10 hrs</b> |
| • Mauryan,   |               |
| • Sunga,   |               |
| • Gupta,   |               |
| • Kushan,  |               |
| • Chandella,   |               |
| • Mughal   |               |
| <br>   |               |
| <b>III. Study of Historical Jewellery- International:</b>  | <b>10 hrs</b> |
| • Art Nouveau,   |               |
| • Art Deco   |               |
| • Edwardian  |               |
| • Victorian  |               |
| • Retro Period   |               |
| • Egyptians  |               |
| <br>   |               |
| <b>IV. Jewellery in the 21<sup>st</sup> century:</b>   | <b>05 hrs</b> |
| • Latest Fashion Trends and Forecast   |               |
| • Colour in Gems   |               |
| <br>   |               |
| <b>V. Types of Jewellery :</b>   | <b>15 hrs</b> |
| • <b>Women's Jewellery</b>   |               |
| ○ Brooches   |               |
| ○ Earring  |               |
| ○ Pendant  |               |
| ○ Bracelet   |               |
| ○ Anklets  |               |
| ○ Ring   |               |
| ○ Necklaces  |               |
| • <b>Type of Necklace :</b>  |               |
| ○ Choker Necklace, Dog Collar, Riviere, Lariat, Y Necklace, Segmented<br>Necklace, Raani Haar, Tapering Necklace & Bridal Necklace |               |

**Essential Readings:-**

1. A History of Jewellery, 1100-1870 by Joan Evans
2. Jewellery Moves: Ornament for the 21st century by Amanda Game and Elizabeth Goring

**Books Recommended:**

1. Authentic Art Deco Jewellery Designs by Franco Deboni and Theodore Menten (Paperback - May 1983)
2. 20th Century Jewelry: by John Peacock (Author)
3. Borel, F. 1994. The Splendor of Ethnic Jewelry: from the Colette and Jean
4. Daily Life in Ancient Mesopotamia BY Nemet-Nejat, Karen Rhea .
5. Seven Thousand Years of Jewellery BY Tait,
6. Jewelry Design in the 21st Century by Claude Mazloum

## Semester II

### Cost Based Designing ( Practical I)

**Code: TJD-202**

**Credits: T 2**

**Periods/Week:3**

**45hrs**

**Max. Marks: 100**

**(CA-30: SEE 70)**

#### **Objectives:**

- ❖ To understand costing process of jewellery design
- ❖ To impart in-depth knowledge of manual & computerised cost estimation of jewellery

#### **Course Contents**

##### **I. Costing and Pricing Strategies, Objectives & Pricing formula : 10 hrs**

- Costing of a Jewellery Piece
- Wastage
- Labour Cost
- Determination of Profit
- Selling Prices
- Jewellery Purchasing.

##### **II. Cost-Based Designing: 20 hrs**

- Designing a Pendant and earring Set for a Particular Cost-Price
- Designing a Ring for a Particular Cost-Price
- Designing a Earring for a Particular Cost-Price

##### **III. Costing in MS Excel**

**15hrs**

- **MS Excel**  
Introduction, spreadsheet, workbooks, saving a file, opening an existing worksheet, Rows and columns, cell entries (numbers, labels, formulas),
- **Various tools & Functions :**  
Filling series, Functions and its parts, Some useful Functions in excel (SUM, AVERAGE, COUNT, MAX, MIN, IF) .Data sort, Renaming sheet, Printing worksheet.
- **Costing :**  
Insert Picture, Rate of Metal & Gem stones, Labour, Wastage, Determination of Profit and selling price.

#### **Books Recommended:**

1. The Crafter's Guide to Pricing Your Work - by Dan Ramsey
2. Gold & Platinum Jewelry Buying Guide by Renee Newman

## Semester II

### Historical Designing (Practical II)

**Code: TJD-202**

**Credits: T 3**

**Periods/Week: 4**

**60 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

#### **Objectives:**

- ❖ To illustrate historical design of jewellery of different periods.
- ❖ To design latest fashion jewellery by using coloured precious and semi-precious gem stones.

#### **Course Contents**

- I. Drawing & Designing of Indian Historical Jewellery** **25 hrs**
- Different periods of India- Mauryan, Sunga, Gupta, Kushan, Chandella, Mughal,
- II. Drawing & Designing of Rest of the world & European Historical Jewellery** **25 hrs**
- Art Nouveau,
  - Art Deco,
  - Edwardian
  - Victorian
  - Egyptian
- III. Drawing and Designing of Latest Fashion Trends** **10 hrs**
- Latest Fashion Trends and Forecast

#### **Books & Magazines Recommended:**

1. Bertozzi
2. Dance of peacock by Usha balkrishnan
3. Art deco jewellery design book
4. Historic Rings: Four Thousand Years of Craftsmanship by Diana Scarisbrick and Kanji Hashimoto

**Semester III**  
**Indian & International Jewellery Markets (Theory)**

**Code: TJD-301**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max. Marks: 100**

**(CA-30: SEE 70)**

**Objectives:**

- ❖ To understand the main features of major international and indian markets
- ❖ To learn the basic skills like safety and care of jewellery

**Course Contents**

|   |               |
|---|---------------|
| <b>I. Main features of Jewellery of major International markets :</b>     | <b>10 hrs</b> |
| • USA   |               |
| • Japan   |               |
| • Dubai   |               |
| <b>II. Main features of Jewellery of European International markets :</b> | <b>10 hrs</b> |
| • Italy   |               |
| • Germany   |               |
| • France  |               |
| <b>II. Traditional Jewellery:</b>   | <b>15 hrs</b> |
| • Definition of Traditional jewellery                                     |               |
| <b>III. Main features of Jewellery of major Indian markets :</b>          | <b>15 hrs</b> |
| • Kundan Meena Jewellery of Rajasthan                                     |               |
| ○ Kundan Meena  |               |
| • Definition/ Meaning   |               |
| • Process   |               |
| • Evaluation  |               |
| ○ Enameling   |               |
| • Kinds of Enamel   |               |
| • Techniques  |               |
| •   |               |
| • Gold Jewellery of Rajkot  |               |
| • Temple Jewellery of Kerala  |               |
| • Terracotta Jewellery of Bengal  |               |
| • Jewellery Style of Maharastra   |               |



- Art of Filigree- Orissa
  - Filigree
    - Meaning & Process
    - Silver Filigree

#### **IV. Other Essentials:**

**05 hrs**

- **Care of jewellery**
  - Storage, wear and cleaning
  - Wardrobe tips
  - Points To Keep In Mind for Prefect Jewellery Collection

#### **Essential Readings:-**

1. Jewelry International: Volume II by Tourbillon International
2. India Jewellery by M.L Nigam
3. Enamellings On Precious Metal By Jeanne Werge-Hartley

#### **Books Recommended:**

1. Traditional Jewellery of India by Keshavlal Dalpatbhai Zaveri & Co. and Virendra Zaveri
2. Metalsmithing for the Artist Craftsman by Richard Thomas
3. Enamellings (The Art of Crafts) by Joan Bolton King
4. Engraving on Precious Metals by A Brittain & P Morton
5. Wonders of Engraving by G. Duplessis
6. Silver Threads: Making Wire Filigree Jewelry by Jeanne Rhodes-Moen
7. Terracotta Art of Bengal (Hardcover) by S. S. Biswas (Author)

**Semester III**  
**Orthographic Views: (Practical I)**

**Code: TJD-303**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objectives:**

- ❖ To acquaint students with the knowledge of different views of jewellery
- ❖ To provide comprehensive knowledge about the perspective view of jewellery pieces and presentation.

**Course Contents :**

**Orthographic Views:**

**45 hrs**

- Technical Drawings of Rings :
  - i. Flat band
  - ii. Concave
  - iii. Convex
  - iv. Fancy rings
- Technical Drawings of Pendants
- Technical Drawings of Earrings :
  - i. Stud
  - ii. Bali
  - iii. Long Earring

**Essential Reading:-**

1. An Introduction to Rings and Modules With K-theory in View (May 15, 2000) by A. J. Berrick and M. E. Keating

**Book Recommended:**

1. Engineering Drawing by N. D. Bhatt and V. M. Panchal

**Semester III**  
**Market Oriented Designing (Practical II)**

**Code: TJD-303**

**Credits: T 3**

**Periods/Week: 4**

**60 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objectives:**

- ❖ To acquaint students with the knowledge of different International and Indian jewellery markets.

**Course Contents :**

**I. Designing International Jewellery : 15 hrs**

- Italy
- Germany
- France
- USA
- Japan
- Dubai

**II. Designing Indian Jewellery : 10 hrs**

- Kundan Meena Jewellery of Rajasthan
  - Kundan Meena
  - Enameling
- Gold Jewellery of Rajkot
- Temple jewellery of Kerala
- Terracotta jewellery of Bengal
- Art of Filigree- Orissa

**III. Designing Traditional Jewellery : 10 hrs**

- Bridal Necklace
- Gold Necklace

**Book Recommended:**

1. 7000 Years of Jewelry: An International History and Illustrated Survey from the Collections of the British Museum by Hugh Tait
2. Jewels of the Nizams by Usha B. Krishnan
3. Over 50 Techniques for Creating Eye-catching Contemporary and Traditional Designs

## Semester IV Diamond Grading & Sorting (Theory)

**Code: TJD- 402**

**Credits: T 3**

**Periods/Week:3**

**45 hrs**

**Max. Marks: 100**

**(CA-30: SEE 70)**

### **Objective:**

- ❖ To provide an understanding of physical and optical properties of diamonds, cutting and polishing, 4-c's, identification, natural inclusions, polishing, faceting, clarity & colour grades

### **Course Contents :**

#### **I. History of Diamond:**

**05 hrs.**

- The Dark Age
- The Middle Age
- Recent Time

#### **II. Type of Diamonds:**

**05 hrs**

- White, Pink, Green, Yellow , Blue & Champagne Diamonds

#### **III. Diamond Cutting, Polishing & Grading :**

**05 hrs**

- Instruments used for Cutting, Grading and Sorting of Diamonds
- Certification of Diamonds

#### **IV. Physical and Optical Properties of Diamonds:**

**20 hrs**

- Surface Luster of Diamonds
- Fluorescence In Diamonds
- Indestructible Diamonds
- The Refractive Index

#### **V. Gemological Characteristics :**

**10 hrs**

- **4-c's of Diamond**
  - Clarity
  - Colour grades
  - Cut
  - Carat

### **Essential Readings:-**

1. Diamonds by Fred Ward
2. Diamonds Famous & Fatal : The History, Mystery and Lore of the World's Most Famous Gem by Leo P. Kendall

### **Books Recommended:**

1. An Analysis Of The International Diamond Market by Donna J. Bergenstock
2. The Curious Lore of Precious Stones by George Frederick Kunz

3. Collecting and Classifying Coloured Diamonds by Stephen C. Hofer
4. Diamonds Famous, Notable, and Unique by Lawrence Copeland

**Semester IV**  
**Men's & Youth's Jewellery ( Practical I)**

**Code: TJD-402**

**Credits: T 2**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objective:**

- ❖ To enhance the creative skills in designing jewellery, drawing, sketching and rendering for men, kids, teens and youth

**Men's jewellery:**

**25 hrs**

- Cufflinks
- Rings
- Bracelets
- Pendants
- Tie pin

**Teen & Youth's Jewellery:**

**20 hrs**

- Pendants
- Earrings
- Rings
- Bracelets
- Brooches
- Kid's Jewellery

**Books & Magazines Recommended:**

1. Art of Jewellery,
2. Facets
3. Gold Magazine
4. Luster
5. J Q Magazine
6. Coutoure International Jeweler
7. Fashion Design Illustration: Men by Ireland, Patrick John., BT Batsford, London.1996
8. Jewel Regent, beyond luxury by Nitu Majhi

**Semester IV**  
**Computer Aided Designing ( Practical II)**

**Code: TJD-403**

**Credits: T 3**

**Periods/Week: 4**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**60 hrs**

**Objectives:**

- ❖ Acquire proficiency in computer application in jewelry designing ,
- ❖ Introduction about various tools used in corel draw
- ❖ Prepare computer sketches on specified themes

**Course Contents:**

**I. Basic Knowledge of Coral draw: 10 Hrs.**

- Introduction to the CorelDraw Program
- Basic Tools in CorelDraw
- Various Shapes
- Color Fill & Outline Tools

**II. Design Development : 10 Hrs.**

- Motif development to make Jewellery
- Interactive Blend Tool
- Diamond with measurement

**III. Theme Based Designing : 30 Hrs.**

- Earrings
- Bracelets
- Pendants
- Rings
- Brooch

**IV. Presentations : 10 Hrs.**

- Special Effects to Images
- Backgrounds
- Text Option
- Frame
- Detail of Jewellery piece.

**Books Recommended:**

1. An introduction to computer aided design for jewellery casting. By Lucian Taylor
2. Corel Draw 11: The official guide Dream tech Publishers

## Semester V

### Manufacturing Process (Theory)

**Code: TJD- 501**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max. Marks: 100**

**(CA-30: SEE 70)**

#### **Objective:**

- ❖ To understand the skills and techniques of basic shaping, soldering and finishing, setting, re-tipping and to understand the areas of repairs, modifications & production of jewellery
- ❖ To acquaint students with hallmarking

#### **Course Contents:**

##### **I. Manufacturing process:**

**10 Hrs.**

- Handmade
- Modeling
- Casting : Method of giving form to Molten metal.
  - The Development of casting technology
  - Model Types
  - Lost Wax Casting
    - Advantages & Limitations
  - Type of Wax
    - Hand carving Wax
    - Building or Sculpture Wax
    - Soft Wax
    - Tacky Sticks
    - Water Soluble wax
    - Injection Wax

##### **II. Solders & Soldering :**

**08 Hrs.**

- Meaning
- Solders
- Flux
- Basic soldering techniques :
  - Methods
  - Electronic components
  - Pipe/Mechanical Soldering
  - Stained Glass Soldering

##### **III. Clips & Connections:**

**07 Hrs.**

- A Keg Closing
- A Box Closing
- Spring Clip
- A Bayonet Closing
- Locks (Stop)
- Clips For Earring

- Connections With Half Ring For Settings
- Connection With A Hinged Stud
- A Nail Connection

#### **IV. Metallic Buildup:**

**15 Hrs.**

- Sand Blasting
- Polishing
- Laser Technology
- Electroforming : Process
- Electroplating
  - Process, Strike, Current Density, Brush Electroplating, Electroless Deposition & Cleanliness

#### **V. Quality Control Process :**

**05 Hrs.**

- a. Focus on Quality Control
- b. Design
- c. Manufacturing Activities
- d. Purity
- e. Certified Precious Stones:
- f. Price Stability
- g. Process & Information Integrity
- h. Hallmarking
  - Introduction of Hallmarking,
  - Certification of Gold
  - BIS Mark
  - Indian Scenario
  - BIS and Consumer Awareness

#### **Essential Readings:-**

1. Jewellery Concept & Technology by Oppi Untracht
2. Jewellery Making Techniques Book: by Elizabeth Olver

#### **Books Recommended:**

1. Jewelry Making and Design Rose and Cirino Dover
2. The Design & Creation Of Jewellery By Rober Von Neuman



**Semester V**  
**Accessory Design (Practical I)**

**Code: TJD-502**

**Credits: T 2**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objective:**

- ❖ To familiarize students with designing of all accessories that complete the fashion image.
- ❖ To develop in-depth understanding of fashion, materials and conceptual strength essential to be a thorough professional.
- ❖ To create an awareness of various materials apart from precious metal and gem stones.

**Course Contents:**

**Accessory design :**

**45 hrs**

- Male& female Watches
- Pen studded with diamonds/colour stones
- Belt buckle
- Spectacles /goggle
- Footwear's buckle
- Hairpin/Back pin
- Mobile cover along with charms
- Others (millinery, purses, bags, wallets, etc.)

**Books & Magazines Recommended:**

1. Accessories (USA)
2. International Watch (USA)
3. Diamond World
4. Gem World,
5. Solitaire international
6. Vogue
7. American Fashion Accessories by Candy
8. Know Your Fashion Accessories by Celia Stall
9. Fashion Accessories by Pepin press
10. Beautiful Button Jewelry By Sue Davis & Susan Davis

**Semester V**  
**Manufacturing process (Practical II)**

**Code: TJD-503**

**Credits: T 3**

**Periods/Week: 4**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**60 hrs**

**Objective:**

- ❖ To instruct the trainees in soldering, shaping and finishing techniques that will enable them to undertake simple ring sizing, chain repairs and similar jewellery work.
- ❖ To provide the knowledge and skills to make jewellery of excellent quality

**Course Contents:**

**Manufacturing process :**

**I. Basic Jewellery manufacturing Techniques:**

**50 Hrs.**

- Sawing
- Filling
- Annealing
- Drilling
- Soldering
- Reverting
- Pickling
- Ultrasonic
- Hammering
- Polishing
- Milling
- Wire Drawing
- Alloying
- Stamping

**II. Stone setting:**

**10 Hrs.**

- Prong
- Channel
- Bezel
- Pave

**Books Recommended:**

1. Jewellery Manufacture and Repair By Charles Jarvis
2. Jewellery Making Manual By Sylvia Wicks
3. Jewellery Making Techniques Book: by Elizabeth Oliver

**Semester VI**  
**Marketing , Advertisement & Brand Building (Theory)**

**Code: TJD-601**

**Credits: T 3**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objective:**

- ❖ To understand the role of advertisement & brand building in Jewellery trade.
- ❖ To provide an understanding of World bullion market, how gold rates vary, retailing precious as well as costume Jewellery .

**Course Contents**

- I. **Marketing Communications:** **05 Hrs.**
  - Advertising, personal selling, sales promotion, public relations, and direct marketing
- II. **Marketing of Jewellery :** **10 Hrs.**
  - 7P's of Marketing
    - i. Product
    - ii. Price
    - iii. Promotion
    - iv. Place
    - v. Packaging
    - vi. People
    - vii. Positioning
  - **Sales promotion:**
    - Definition
    - Tips How to Increase Sales
- III. **Advertisements:** **10 Hrs.**
  - Advertising: Definition, Meaning & Importance.
  - Types of Advertising:
    - Local, National, Retail, Business, Trade,
    - Industrial, Social, Classified and Display Advertising.
  - Role of Advertisement in Jewellery trade.
- IV. **Advantages of Jewellery Exhibitions & Trade Fairs** **05 Hrs.**
- V. **Brand Management :** **15 Hrs.**
  - Importance of Brand
  - Types of Brand
  - Brand Positioning
  - Building Brand personality
  - Strengthening Online Identity

### **Essential Readings:-**

1. Chunawala S.A., Sethia K.C., *Foundations of Advertising Theory & Practice*,
2. *Marketing and Online Media to Reach Buyers Directly* by David Meerman Scott

### **Books Recommended:**

1. David Akkar, *Managing Brand Equity*, Prentice-Hall of India, New Delhi
2. Chunawala S.A., Sethia K.C., *Brand Management*, Himalaya Publishing House,
3. Mumbai.
4. *The New Rules of Marketing and PR: How to Use News Releases, Blogs, Podcasting, Viral*
5. *Why We Buy* - Paco Underhill
6. *Ultimate Guide to Your Profitable Jewelry Booth* by **Rena Klingenberg**

**Semester VI**  
**Advance Computer Aided Designing (Jewel cad)**  
**(Practical I)**

**Code: TJD-602**

**Credits: T 2**

**Periods/Week: 3**

**45 hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objective:**

❖ Computer-aided Design improves jewellery design Skills and produce images of jewellery.

JewelCAD was one of the first of the CAD software companies to focus specifically on CAD design for jewellery and rapid prototyping, and it is still a popular choice for manufacturing. .

**Course Contents :**

**JewelCAD**

**45 Hrs.**

- Basic
- Create 3D design awareness of different styles of jewellery
- Develop skills to communicate design intention
- Create digital jewellery models
- Translate digital models to 3D master models through JewelCAD applications.

**Books Recommended:**

1. Cad/cam: Computer-aided Design And Manufacturing by Groover Mikell P, Zimmers Emory
2. Cad/cam: Computer-Aided Pattern Design & Product Development by Alison Beazley& Terry Bond

**Semester VI**  
**Project & internship (Practical II)**

**Code: TJD-603**

**Credits: T 3**

**Periods/Week:4**

**60hrs**

**Max.Marks: 100**

**(CA-30: SEE 70)**

**Objective:**

- ❖ To encourage students to work in with relevant industries.
- ❖ To learn work on live projects conjugation
- ❖ An avenue to enhance academic learning through hands-on work experience.
- ❖ Experience complements further course of study.
- ❖ Get advice on career subjects from knowledgeable & experienced professionals.
- ❖ Gain exposure to a professional work atmosphere.

**Project 45 Hrs.**

**I. Design a necklace set on A3 sheet**

**II. Power Point presentation**

- Submission of Project Report (4 copies) orally defending the report and power point presentation followed by viva voice.
- Advertisement & Brand

**Reports :**

**I. Summer Training 15Hrs.**

Craft Based Project

Project Report to be submitted :

- a. Background of Industry/ Factory
- b. Number of Employs
- c. Manufacturing Process
- d. Hand sketch's
- e. Experience
- f. Any Other Relevant Details

**II. Jewellery exhibition visit report**

**III. Report on industry visit**

**Metal Decorations:**

**10 hrs**

- **Engraving**
  - Meaning & Process