



**KALINGA  
UNIVERSITY**

**SCHEME & SYLLABUS FOR**

# **Bachelor of Vocational Studies (B. Voc) Jewellery Design**



Kalinga University, Naya Raipur, Chhattisgarh

# BACHELOR OF VOCATIONAL STUDIES (B.VOC) IN JEWELLERY DESIGN

Semester-I							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD101	Communication Skills	3	0	3	30	70	100
BVJD102	Fundamentals of Information Technology	3	0	3	30	70	100
BVJD103	Gemology-I	3	0	3	30	70	100
BVJD104	Fundamentals of Jewellery Design-I	3	0	3	30	70	100
BVJD105P	On Job Training/ Internship/Workshop	0	36	18	50	150	200
	<b>Total</b>	12	36	<b>30</b>	<b>170</b>	<b>430</b>	<b>600</b>

Semester-II							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD201	Gemology-II	3	0	3	30	70	100
BVJD202	Environmental Studies	3	0	3	30	70	100
BVJD203	Fundamentals of Jewellery Design-II Elle Designing	3	0	3	30	70	100
BVJD204	Soft Skills and Personality Enhancement	3	0	3	30	70	100
BVJD205P	On Job Training/ Internship/Workshop	0	36	18	50	150	200
	<b>Total</b>	9	36	<b>30</b>	<b>170</b>	<b>430</b>	<b>600</b>

Semester-III							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD301	Gemology-III	3	0	4	30	70	100
BVJD302	Fundamentals of Jewellery Design-III	3	0	4	30	70	100
BVJD303	Universal Human Values	3	0	4	30	70	100
BVJD304P	On Job Training/ Internship/Workshop	0	36	18	50	150	200
	<b>Total</b>	<b>9</b>	<b>36</b>	<b>30</b>	<b>140</b>	<b>360</b>	<b>500</b>

Semester-IV							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD401	Marketing	3	0	4	30	70	100
BVJD402	Gemology-IV	3	0	4	30	70	100
BVJD403	Fundamentals of Jewellery Design-IV	3	0	4	30	70	100
BVJD404P	On Job Training/ Internship/ Workshop	0	36	18	50	150	200
	<b>Total</b>	<b>9</b>	<b>36</b>	<b>30</b>	<b>140</b>	<b>360</b>	<b>500</b>

Semester-V							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD501	Business Ethics and Management	3	0	4	30	70	100
BVJD502	Gemology-V	3	0	4	30	70	100
BVJD503	Jewellery Design-V	3	0	4	30	70	100
BVJD504P	On Job Training/ Internship/Workshop	0	36	18	50	150	200
	<b>Total</b>	<b>9</b>	<b>36</b>	<b>30</b>	<b>140</b>	<b>360</b>	<b>500</b>

Semester-VI							
Code No.	Paper	L	T/P	Credits	Internal Marks	End Semester Exam	Total Marks
BVJD601	Entrepreneurship Development	3	0	4	30	70	100
BVJD602	Gemology-VI	3	0	4	30	70	100
BVJD603	Fundamentals of Jewellery Design-VI	3	0	4	30	70	100
BVJD604P	<b>On Job Training/ Internship/Workshop</b>	0	36	18	50	150	200
	<b>Total</b>	9	36	<b>30</b>	<b>140</b>	<b>360</b>	<b>500</b>

# SEMESTER-I

## COMMUNICATION SKILLS

### BVJD101

#### Course Objective

The purpose of this course is to introduce students to the theory, fundamentals and tools of communication and to develop in them vital communication skills which should be integral to personal, social and professional interactions. One of the critical links among human beings and an important thread that binds society together is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and non-verbal. In the context of rapid globalization and increasing recognition of social and cultural pluralities, the significance of clear and effective communication has substantially enhanced.

#### Course outcome:

1. The purpose of this course is to introduce students to the theory, fundamentals and tools of communication
2. To develop vital communication skills which should be integral to personal, social and professional interactions.
3. One of the critical links between human beings.
4. An important thread that binds society together is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and non-verbal.
5. In the context of rapid globalization and increasing recognition of social and cultural pluralities, the significance of clear and effective communication has substantially enhanced.

#### CONTENTS

##### Unit I: Introduction:

Theory of Communication, Types and modes of Communication, Mediums and channels of communication, barriers to communication, English as a Global language, the Lingua Franca, Social influences on English

##### Unit II: Language of Communication:

Verbal and Non-verbal (Spoken and Written) Personal, Social and Business Barriers and Strategies Intra-personal, Inter-personal and Group communication, Varieties of English, Language, Accent, Dialect, Colloquialism, Historical influences on English

### **Unit III: Speaking Skills:**

Monologue Dialogue Group Discussion Effective Communication/ Mis- Communication Interview Public Speech, Regional influences on English, Convergence and divergence, Linguistic Imperialism,

### **Unit IV: Reading and Understanding-**

Close Reading, Reading analysis of a text-Audience and purpose, Content and theme, Tone and Mood, stylistic devices, structure Comprehension- Analysis and Interpretation Translation(from Indian language to English and vice-versa) Literary/Knowledge Texts

### **Unit V: Writing Skills**

Documenting Report Writing Making notes Letter writing, Writing tabloids, diary entry, open letters, essays, newsletter and magazine articles, skits, short stories, impersonating characters.

It will enhance Language of communication, various speaking skills such as personal communication, social interactions and communication in professional situations such as interviews, group discussions and office environments, important reading skills as well as writing skills such as report writing, note taking etc. While, to an extent, the art of communication is natural to all living beings, in today's world of complexities, it has also acquired some elements of science. It is hoped that after studying this course, students will find a difference in their personal and professional interactions.

### **Recommended Readings:**

1. Fluency in English-Part II, Oxford University Press, 2006.
2. Business English, Pearson, 2008.
3. Language, Literature and Creativity, Orient Blackswan, 2013.
4. Language through Literature (forthcoming) ed. Dr. Gauri Mishra, DrRanjanaKaul, DrBrati Biswas

# FUNDAMENTALS OF INFORMATION TECHNOLOGY

## BVJD102

### Unit-I

**Computer characteristics:** Speed, storage, accuracy, diligence; Digital signals, Binary System, ASCII; Historic Evolution of Computers; Classification of computers: Microcomputer, Minicomputer, mainframes, Supercomputers; Personal computers: Desktop, Laptops, Palmtop, Tablet; Hardware & Software; Von Neumann model.

### Unit-II

**Hardware:** CPU, Memory, Input devices, output devices. Memory units: RAM (SDRAM, DDR RAM, RDRAM etc. feature wise comparison only); ROM-different types: Flash memory; Auxiliary storage: Magnetic devices, Optical Devices; Floppy, Hard disk, Memory stick, CD, DVD, CD/DVD-Writer; Input devices-keyboard, mouse, scanner, speech input devices, digital camera, Touch screen Voice Input, Joystick, Optical readers, bar code reader; Output devices: Display device, size and resolution; CRT, LCD, LED; Printers: Dot-matrix, Inkjet, Laser; Plotters, Sound cards & speaker.

### Unit-III

**Software:** System software, Application software; concepts of files and folders, Introduction to Operating systems, Different types of operating systems: single user, multitasking, time-sharing multi-user; Booting, POST; Basic features of two GUI operating systems: Windows & Linux (Basic desk top management); Programming Languages, Compiler, Interpreter, Databases; Application software: Generic Features of Word processors, Spread sheets and Presentation software; Generic Introduction to Latex for scientific typesetting; Utilities and their use; Computer Viruses & Protection, Free software, open source.

### Unit-IV

**Computer Networks and Internet:** Connecting computers, Requirements for a network: Server, Workstation, switch, router, network operating systems; Internet: brief history, World Wide Web, Websites, URL, browsers, search engines, search tips; Internet connections: ISP, Dial-up, cable modem, WLL, DSL, leased line Wireless and Wi-Fi connectivity ; email, email software features (send receive, filter, attach, forward, copy, blind copy); characteristics of web-based systems, Web pages, Web Programming Languages.

## Unit-V

**Information Technology And Society:** Indian IT Act, Intellectual Property Rights, issues. Application of information Technology in Railways, Airlines, Banking, Insurance, Inventory Control, Financial systems, Hotel management, Education, Video games, Telephone exchanges, Mobile phones, Information kiosks, special effects in Movies.

**Programming Concepts & Techniques:** Program Concept, Characteristics of Programme, Stages in Program Development, Tips for Program Designing, Programming Aids, Algorithms, Pseudo code, Notations, Design, Flowcharts, Symbols, Rules, compiler & Interpreter. Introduction to programming techniques, Top-down & Bottom-up approach, Unstructured, & Modular programming, Cohesion, Coupling, Debugging, Syntax & Logical Errors, Linking and Loading, Testing and Debugging, Documentation.

### Reference Books:

1. Programming in C, R.S. Salaria, Khanna Publishing House
2. Computer Concepts and Programming in C, R.S. Salaria, Khanna Publishing House
3. Handbook of Computer Fundamentals, N.S. Gill, Khanna Publishing House

# GEMOLOGY I

## BVJD103

### Unit-I

#### Introduction to Gemology:

The evolution of the science of gemology, Formation-Geology related to gem minerals. Earth's interior, Geological activities, Origin and occurrence of gem stones and their classification. Basic properties of gems-Beauty, Rarity and Durability, Chemical Composition, Crystal Structure, Chemical Bonds, Crystallography. Classification of gemstones, organic & inorganic gems, Groups, species and varieties; visual observation-4 C's of gemstones, phenomenal varieties, the major gem occurrence of the world.

### Unit-II

#### Chemical Properties:

Atomic structure, electrons and chemical bonds, crystalline state and crystalline Materials Crystal lattice, Amorphous and Metamict minerals, Isomorphism and polymorphism.

### Unit-III

#### Physical Properties:

Specific Gravity and density: Durability

Hardness: Cleavage/ Parting

### Unit-IV

#### Optical Properties:

- a) Importance of light in gemology
- b) Isotropism and anisotropism, pleochroism, polarization
- c) Electromagnetic spectrum-Visible Spectrum; Nature of visible light, wave length and frequency
- d) Light Reflection-Transparency, Reflection and effects: (Luster) due to internal reflection-Total Internal Reflection

- e) Light Refraction- Single and Double Refraction- Total internal refraction (Brilliance)
- f) Dispersion of light
- g) Polarization
- h) Refractive index, birefringence and its determination by Refractometer; Reflectivity; Reflectometers.
- i) Interference figures and their use in gem sorting

**Instrumentation:**

- a) 10 x loupe
- b) Polariscope and Conoscope
- c) Dichroscope
- d) Ultra-violet light unit
- e) Hardness pencils

# FUNDAMENTALS OF JEWELLRY DESIGN I

## BVJD104

### Unit-I

- a) Introduction to the Precious World of Jewelry
- b) Jewelry Designing: Types of Jewelry, an overview, Sources & Inspirations

### Unit-II

Study of Design: Elements and Principals of Design; Point, Line, Shape, Plane, Texture, Color, Pattern, Form and Space, Balance, Rhythm, Harmony, Proportion, Order, Movement, & Compositions.

### Unit-III

- a) Role of Jewelry Designer
- b) Understanding of various shapes found in nature, forms of creation
- c) Gemstone shapes and cuts
- d) Deriving inspiration from various elements
- e) Developing skills of turning inspiration into ideas
- f) Hand control exercise
- g) Free hand and counter sketching
- h) Still life and perspective view
- i) Shading in geometrical shapes

### Unit-IV

Study of Historical Jewellery-

International: Art Nouveau, Art Deco, Edwardian, Victorian, Retro Period, Egyptians

# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD105P**

# SEMESTER-II

## GEMOLOGY-II

### BVJD201

#### UNIT-1

##### “4 C’s of Gemstones”

###### **Color and Phenomena:**

Coloring elements; Allochromatic, Ediochromatic, Pseudo chromatic; Pleochroism; Light-Interference, Lustre; Sheen; play of colour, Adularescence, colour change, Chatoyancy, Asterism, Labradorescence, Iridescence, Orient, Aventurescence

###### **Clarity:**

Inclusions and their types, Breaks, Fluid Inclusion and Included crystals, Inclusions for identification Growth lines and colour zoning, twinning, types of inclusion, identification of natural and synthetic gemstones, colour zone diffusion and induced feathers/fingerprints, use of laboratory equipment’s and methods for identification

###### **Cut:**

Fashioning of Gemstones, Shape and style, Traditional gem shapes, other gem shapes and styles, proportions and finish

###### **Carat Weight:**

Size of the gemstone and carat weight

#### UNIT-2

###### **Introduction to Gem Treatments:**

Bleaching, Heat Treatment, Fracture Filling

###### **Gemstone Alternatives:**

Synthetics, Imitation and Simulants

### Study of different type of Gemstones:

- |                          |                    |                |
|--------------------------|--------------------|----------------|
| a) Ruby                  | g) Coral           | n) Labradorite |
| b) Sapphire              | h) Pearl           | o) Aventurine  |
| c) Yellow sapphire       | i) Amber           | p) Opal        |
| d) Emerald               | j) Mother of Pearl | q) Sunstone    |
| e) Garnet                | k) Carnelian       | r) Blood stone |
| f) Chrysoberyl cat's eye | l) Moonstone       | s) Onyx        |
|                          | m) Alexandrite,    |                |

### Instrumentation:

1. Microscope
2. Balance for specific gravity determination
3. Spectroscope
4. Chelsea Colour filter

### UNIT-3

#### Care and Cleaning of Gems:

Handling and Storage, Cleaning-Ultrasonic Cleaners, Steam Cleaners, Gentle cleaning

### UNIT-4

#### Organic Gemstone:

Pearls, Shells, Amber, Coral, Ivory, Jet.

# ENVIRONMENTAL STUDIES

## BVJD202

### Unit 1 : Introduction to Environmental Studies

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

### Ecosystems

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems :
  - a) Forest ecosystem
  - b) Grassland ecosystem
  - c) Desert ecosystem
  - d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

### Unit 2 : Natural Resources : Renewable and Non-renewable Resources

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water : Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

### Unit 3 : Biodiversity and Conservation

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

### Unit 4 : Environmental Pollution

- Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks

- Solid waste management : Control measures of urban and industrial waste.
- Pollution case studies.

### **Environmental Policies & Practices**

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

### **Unit 5 : Human Communities and the Environment**

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management : floods, earthquake, cyclones and landslides.
- Environmental movements : Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

### **Suggested Readings:**

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999.Global Ethics and Environment, London, Routledge.
4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll.Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36--37.
7. McCully, P. 1996. Rivers no more: the environmental effects of dams(pp. 29--64). Zed Books.
8. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
9. Odum, E.P., Odum, H.T. & Andrews, J. 1971.Fundamentals of Ecology. Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.

11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.

# FUNDAMENTALS OF JEWELLERY DESIGN-II

## ELLE DESIGNING

### BVJD203

#### **UNIT-1**

History and Purpose of Jewelry.

#### **UNIT-2**

History of Jewellery in Indian context.

#### **UNIT-3**

Study of historical Jewellery-India Mauryan, Sunga, Gupta, Kushan, Chandella, Mughal.

#### **UNIT-4**

History of Ornamentation: Brief Introduction.

#### **UNIT-5**

Jewellery in the 21st century: Latest Fashion Trends and Forecast, Colour in Gems.

# SOFT SKILLS AND PERSONALITY ENHANCEMENT BVJD204

## Course Outcome

1. To facilitate Personality Development.
2. To improve Soft skill.
3. To improve Presentation skill.
4. To prepare multimedia presentation.
5. To facilitate in an Interview and being successful in it.

### UNIT-1

- (I) Team Building—The magic of synergy, characteristics of an effective team, essentials Of an effective team, Team Dynamics, Team Leading, Managing a Team.
- (II) Art of Negotiation –To understand what is negotiation, Ways of negotiating and being Successful in it, to understand the power of language and non-verbal communication.
- (III) Grooming –To learn selection of proper attire as per the place, practiced perception, How to carry one's self,  
How to project one's self in the positive frame and spirit.

### UNIT-2

- (I) Organizing Meetings—How to announce, call and organize a meeting in a smooth manner, How to design Agenda and prepare Minutes of Meeting
- (II) Telephonic Etiquettes—Learn the tone and pitch of voice while speaking over phone, How to send a voice mail.
- (III) Business Etiquettes—What does business etiquettes mean, Professional and Cultural expectations, Effective writing, Corporate Communication, Interaction with foreign clients.

### UNIT-3

- (I) Stress Management –Types of stress, Symptoms and causes of Stress, Power of perception, Reaction to stress, Stress Management techniques.

- (II) Time Management-Importance of Time Management, Prioritizing Tasks, Goal setting, Barriers to Time Management, Planning Routine and Time Tables.
- (III) Self-Management –Self-evaluation, Self-discipline, Self-criticism, SWOT analysis, Self Awareness, Development of the Self.

#### **UNIT-4**

- (I) Presentation Skills-How to prepare a presentation, Knowing the audience and their requirements, Effective ways to deliver presentation, How to prepare Multimedia presentation.
- (II) Organizational Skills-How to understand the nature and structure of organization, to understand hierarchy and communication channel of the organization, Clarity about the roles and responsibilities in an organization, How to be a team member, How to draft reports
- (III) Leadership Skills

#### **UNIT-5**

- (I) Group Discussion-Understanding the nature of discussion, Difference between debate and discussion, Ways to form and present arguments, Ways to defend your point.
- (II) Personal Interview-To learn the skills of appearing in an interview and being successful in it.
- (III) Public Speaking-Art of public speaking, To know the rhetoric of making a public speech, exploring rhetorical elements through various ideas..
- (IV) Conference and Meeting, Participation and Technical clarity in conference and meeting, Learning to listen and respond, Final Report drafting.

#### Reference Books:-

1. Soft Skill for everyone-Jeff Butterfield
2. Soft Skill for-S.I. Hariharan -MJP Publications
3. Personality Development & Soft skill-Goyal Brothers Prakasan

# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD205P**

# SEMESTER-III

## GEMOLOGY-III

### BVJD301

#### UNIT-1

##### **Introduction to Crystallography:**

Definition and conditions conducive for the formation of crystals. Crystal morphology-faces, forms, edges, solid angles, interfacial angle and its measurement by contact Goniometer, law of constancy of interfacial angle.

#### UNIT-2

##### **Crystallographic Elements:**

Symmetry elements–crystallographic axes, lettering and order of crystallographic axes, Laws of crystallography–law of constancy of symmetry, law of constancy of interfacial angles, Classification of crystals into systems.

#### UNIT-3

##### **Crystal Systems:**

Study of following crystallographic systems with respect to their elements of symmetry, crystallographic axes and their forms with indices. i. Orthorhombic (Type: Barytes) ii. Tetragonal (Type: Zircon) iii. Cubic (Type: Galena) iv. Hexagonal (Type: Beryl) v. Monoclinic (Type: Gypsum) vi. Triclinic (Type: Axinite).

#### UNIT-4

##### **Twinning:**

Twin crystals, Effects of Twinning, composition plane,, twinning plane and twinning axis, Types of twins-simple and repeated (polysynthetic twins), contact and penetration twins: secondary twins. Examples related to gemology.

## **UNIT-4**

### **Synthetic processes:**

- A brief history of early gemstone synthesis,
- Flame fusion (Verneuil Process),
- Czochralski (Crystal pulling),
- Kyropoulos
- Skull melting process,

### **Treatments:**

- Bleaching,
- Coating,
- Spraying and Foiling,
- Impregnation with oil, resin
- Fracture filling (colorless),
- Heat Treatment,
- Diffusion Treatment,
- Beryllium Diffusion,
- Flux fusion process,
- Hydrothermal process,
- Gel growth,
- Ceramic process
- Dyeing (Colored impregnation)
- Graphitization,
- Glass filling Lead, Bismuth,
- Laser Drilling,
- Irradiation
- Lattice diffusion
- Sugar smoke Treatment
- Surface modification
- High Pressure High Temperature HPHT treatment
- Filling of pores (Porous stones)-Colorless,
- Heat treatment in ruby and sapphires with different kinds of residuals, Irradiation, disclosure of enhancements

# FUNDAMENTALS OF JEWELLERY DESIGN-III

## BVJD302

### UNIT-1

**Types of Jewellery and variations among them:**

Women's Jewellery:

- Rings
- Brooches
- Earring
- Pendant
- Bracelets
- Anklets
- Necklaces: Choker Necklace, Dog Collar, Riviere, Lariat, Y Necklace, Segmented Necklace, Raani-Haar, Tapering Necklace & Bridal Necklace etc.

### UNIT-2

Modern jewellery.

### UNIT-3

Conceptual designing.

### UNIT-4

Fashion, Designer jewellery.

# UNIVERSAL HUMAN VALUES

## BVJD303

### Objectives:

1. To help students distinguish between values and skills, and understand the need, basic guidelines, content and process of value education.
2. To help students initiate a process of dialog with in the mselves to know what they'really want to be'in their life and profession.
3. To help students understand the meaning of happiness and prosperity for a human being.
4. To facilitate the students to understand harmony at all the level sofhuman living, and live accordingly.
  1. To facilitate the students in applying the understanding of harmony in existence in their profession and lead an ethical life

### Course Outcome:

On completion of this course, the students will be able to

1. Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of h

appiness and prosperity and do a correct appraisal of the current scenario in the society

2. Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body.
3. Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore the role in ensuring a harmonious society
4. Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.
5. Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment where they work.

### UNIT-1

**Course Introduction- Need,** Basic Guidelines, Content and Process for Value Education  
Understanding the need, basic guidelines, content and process for Value Education, Self-Exploration—what is it?—its content and process; ‘Natural Acceptance’ and Experiential Validation— as the mechanism for self-exploration, Continuous Happiness and Prosperity—A look at basic Human Aspirations, Right understanding, Relationship and Physical Facilities— the basic requirements for fulfillment of aspirations of every human being with their correct priority, Understanding Happiness and Prosperity correctly—A critical appraisal of the current scenario, Method to fulfill the above human aspirations: understanding and living in harmony at various levels

### UNIT-2

Understanding Harmony in the Human Being—Harmony in Myself  
Understanding human being as a co-existence of the sentient ‘I’ and the material ‘Body’, Understanding the needs of Self (‘I’) and ‘Body’—Sukh and Suvidha, Understanding the Body as an instrument of ‘I’ (I being the doer, seer and enjoyer), Understanding the characteristics and activities of ‘I’ and harmony in ‘I’, Understanding the harmony of I with the Body: Sanyam and Swasthya; correct appraisal of Physical needs, meaning of Prosperity in detail, Programs to ensure Sanyam and Swasthya.

### UNIT-3

Understanding Harmony in the Family and Society—Harmony in Human-Human Relationship  
Understanding harmony in the Family— the basic unit of human interaction, Understanding values in human-human relationship; meaning of Nyaya and program for its fulfillment to ensure Ubhay-tripti; Trust (Vishwas) and Respect (Samman) as the foundational values of relationship, Understanding the meaning of Vishwas; Difference between intention and competence, Understanding the meaning of Samman, Difference between respect and differentiation; the other salient values in relationship, Understanding the harmony in the society (society being

an extension of family): Samadhan, Samridhi, Abhay, Sah-astitva as comprehensive Human Goals, Visualizing a universal harmonious order in society- Undivided Society (Akhand Samaj), Universal Order (SarvabhaumVyawastha )- from family to world family!.

#### **UNIT-4**

Understanding Harmony in the Nature and Existence-Whole existence so-existence Understanding the harmony in the Nature, Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature, Understanding Existence as Co-existence (Sah-astitva) of mutually interacting units in all-pervasive space, Holistic perception of harmony at all levels of existence.

#### **UNIT-5**

Implications of the above Holistic Understanding of Harmony on Professional Ethics Natural acceptance of human values, Definitiveness of Ethical Human Conduct, Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order, Competence in Professional Ethics: a) Ability to utilize the professional competence for augmenting universal human order, b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems, technologies and management models, Case studies of typical holistic technologies, management models and production systems, Strategy for transition from the present state to Universal Human Order: a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers, b) At the level of society: as mutually enriching institutions and organizations.

# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD304P**

# SEMESTER-IV

# MARKETING

# BVJD401

## UNIT-1

- Marketing Concepts, Concept of SALES, Difference between Sales and Marketing
- Approaches to Marketing-Study Approaches and Functional Approaches-Marketing Process-Functions of Marketing
- Market research and Planning-Nature, Process and Contents of Marketing Plan
- Consumer relationship

## UNIT-2

- Understanding a sales associate and his responsibility
- Responsibility while making sales and add-on sales
- General rule for customer contact
- Customer engaging techniques

## UNIT-3

- Factors Influencing Buying Behavior of customers-Buyer decision process
- Type of Customers
- The New Age Customer
- Handling Customer Complaints

## UNIT-4

- Effective Complaint Management systems
- Understanding Common Customer Complaints
- Essential Steps of Selling Process

1. Approach the customer
2. Exchange information
3. Build value
4. Create desire
5. Trial close
6. Close the sale
7. Follow-up

#### **UNIT-5**

- Concept of Good, Bad and Excellent Service
- Stock Management

# GEMOLOGY-IV

## BVJD402

### UNIT-1

#### **Gemstone Formation in different rocks:**

Igneous rocks, magmatic and hydrothermal phases and gemstone formation in pegmatite's, topaz, tourmaline, beryl, and other gems. Basalts and formation of ruby. Sedimentary rocks, placer deposits, gemstones found in gravels and other sedimentary rocks.

Metamorphic rocks and formation of gems like ruby, spinel, garnet etc. Formation of diamonds in the earth's interior.

Origin of diamonds accordingly its surface marking, shape and habits of rough diamonds

### UNIT-2

#### **Gemstone Exploration:**

Mining, Mining Techniques, Prospecting, Extraction and Recovery of gemstones.

### UNIT-3

#### **Gem Localities:**

Type localities of different gemstones

Major Gem mines

Global and Indian Coloured stone Markets

### UNIT-4

#### **World Famous gems:**

Hope Diamond, Kohinoor, Black Prince Ruby, Pearl of India, Tiffany Diamond, etc.

# FUNDAMENTALS OF JEWELLERY DESIGN-IV

## BVJD403

### Basic jewellery designing

#### UNIT-1

Equipment for Jewellery Drawing and Design, Jewellery Drawing, Nature Drawing.

#### UNIT-2

Historic Ornament, the Beginning of Design (Variations).

#### UNIT-3

Rendering in Pencil, Rendering with Brush, Stone Settings.

#### UNIT-4

Rendering in Colour, Rendering Stones.

# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD404P**

# **SEMESTER-V**

# **BUSINESS ETHICS AND MANAGEMENT**

## **BVJD501**

### **UNIT-1**

Management principles

Concept, Scope Importance, Objectives and Functions.

### **UNIT-2**

Human resource development

Personal Management and Human resource management.

### **UNIT-3**

Planning Processes

Critical thinking, creative thinking, strategic thinking Conventional and strategic planning.

### **UNIT-4**

Recruitment trends, Selection steps, Type of Interviews, Induction, Job changes, promotions, Career planning; concepts, objectives and development.

### **UNIT-5**

Listening and understanding skills, Leadership skills, Problem solving steps.

# GEMOLOGY-V

## BVJD502

### UNIT-1

#### Introduction to Diamonds:

Chemical composition, Physical properties, Durability of Diamonds,

Diamonds and their internal structure: Crystal Forms, Growth Features, Crystallography, Cleaving, Surface Markings, Rough Diamonds

#### 4 C's of Diamonds-

- **Color:** Grades, treatments, enhancements Depth of the colour, Shade of the colour, Colour of the inclusion, position of the colour zoning, Fluorescence and phosphorescence.
- **Clarity:** flaws, inclusions, blemishes, grading standards,
- **Cut:** Types, History, Proportions, Variations, planning and marking, sawing, Bruting, Faceting of table, Faceting of crown, Faceting of pavilion. Instruments used in cutting and polishing of diamond processing. Manual method of planning and marking. Computerized or automatic method for planning marking and diamond sawing.
- **Carat:** measurement and calculation, Cost computation.

### UNIT-2

#### Optical Properties and Crystallinity:

Cubic system; Forms; Twins, Parallel growth; Irregular forms; Growth features, Fracture; Cleavage; Hardness (Moh's Scale); Specific gravity (Heavy liquids and Hydrostatic method); Electrical conductivity, Thermal conductivity; Graphitization.

Single; double and anomalous double refraction, Refractive index; Strain patterns; Dispersion; Absorption spectra; Transparency to Ultra-violet and x-rays; Reflectivity; Luminiscence.

#### Geological occurrences and their history:

Geological occurrence of Diamonds, Diamond deposits, Kimberlites and Lamprolites, pipe deposits. Gem and industrial diamond, kimberlite (mines); Alluvial deposits (river beds), Marine deposits (beaches, sea-bed); Meteoric diamonds; Localities like Australia; Borneo; Brazil; India; Sierra Leon; Russia; South Africa; South West Africa, Zaire, Canada etc.

### **Working and manufacturing process of diamonds:**

- Survey methods of diamond deposits, Mining techniques of diamond deposits, History of diamond and diamond mining, Blood diamonds and conflict diamonds.
- Extraction of Diamonds: Crushing, Washing and Screening, Heavy media separator, Grease table, Grease belt, ray separation.
- Sorting of rough diamonds: Sorting by Size; Shapes; Colour; Purity.
- Manufacturing of diamonds: Grains; Sawing; Cleaving; Bruting; Grinding; Polishing; 4,3,2, point stones; Acidizing; Ultrasonic cleaning.

### **UNIT-3**

#### **Diamond grading:**

##### **1. COLOUR GRADING OF POLISHED STONES:**

Lighting standards and magnification; Comparison stones. Colour grading systems (G.I.A.; HRD; Indian, C.I.B.J.O.)

##### **2. CLARITY GRADING OF POLISHED STONES:**

Magnification; Lighting; International grading scales; (G.I.A.; HRD; Indian; C.I.B.J.O.); Criteria for grading; Internal blemishes; External defects.

##### **3. GRADING FOR CUT:**

Spread stones; Lumpy and Fish-eye stones, Proportion scope and proportion analyzing, Carat system; weighing scales; Estimating weight of mounted stones (gauges); Sieves and sieve sizes. Estimating: Table percentage, Pavilion depth, Crown angle, Pavilion angle and Girdle thickness.

### **UNIT-4**

#### **Synthetic diamonds and Simulants:**

##### **1. SYNTHETIC DIAMOND:**

Synthesis; Artificial colorations; Identification of treated diamond.

##### **2. DIAMOND SIMULANTS:**

Gadolinium Gallium Garnet (GGG); Yttrium Aluminium Garnet (YAG); Strontium Titanate; Synthetic Rutile; Synthetic Cubic Zirconia; Synthetic moissanite; Spinel, Sapphire; Zircon; Topaz; Quartz; Paste, Doublets.

#### **Diamond Markets**

Global and Indian Markets for Diamonds

De-Beers consolidated Mines; Diamond Trading Company (D.T.C.); Sights supplied by D.T.C.; Diamond Bourses; Clubs; Operation of the National and International markets. Sources of Rough diamonds: HDC, MMTC, NMDC, Local-resellers, DTC, Open market.

# GEMOLOGY-V

## BVJD503

### UNIT-1

**Main features of Jewelry of major International markets:** USA, Japan, Dubai, French market, Italian market, German market.

### UNIT-2

**Main features of Jewellery of European International markets:** Italy, Germany, France.

### UNIT-3

**Traditional Jewellery:** Definition of Traditional jewellery.

### UNIT-4

**Main features of Jewellery of major Indian markets:**

Kundan Meena Jewellery of Rajasthan, Kundan Meena, Definition/Meaning, Process, Evaluation, Enameling, Kinds of Enamel, Gold Jewellery of Rajkot, Temple Jewellery of Kerala, Terracotta Jewellery of Bengal, Jewellery Style of Maharashtra, Art of Filigree- Orissa, Filigree, Meaning & Process, Silver, Filigree.

### UNIT-5

**Jewelry materials:**

How to choose Material for Jewellery

Designs derived from Nature- the Moth-Mullen in Design, The Snow Crystal in Design, the Seahorse in Design, and The Butterfly in Design

Designing-Elliptical Brooch, Buckles, Clasps, Bar Pins Pendants, Lavalier and Necklaces, Pendants, Lavalier and Necklaces, the watch fob, hat pin, cuff link, cuff button, the finger ring, scarf pin, Chains, pendant slides, pendant connections

Designing-flower spray

Study of apple blossoms-bud forms, bud sections, sections of seed pods, leaf outlines Studies from Peacock, shells

# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD504P**

# SEMESTER-VI

# ENTREPRENEURSHIP DEVELOPMENT

## BVJD601

### UNIT-1

Concept of entrepreneurship, entrepreneurial talent, business ideas, fundamentals of entrepreneurship, challenges of entrepreneurship.

### UNIT-2

Project Management: Feasibility and Viability.

### UNIT-3

Skill development, Business Incubation.

### UNIT-4

Advertising: types, agencies, media planning, brand awareness, brand names, headlines, slogans, basic elements of advertising.

### UNIT-5

Code of Ethics.

# GEMOLOGY-VI

## BVJD602

### UNIT-1

#### **Metal:**

Precious metals: Gold, Silver & Platinum, Characteristics/Properties and Classification of Metals, Metal Texture, Alloy.

### UNIT-2

#### **Metal and their Behavior:**

Characteristics and classification, ores, metal groups-ferrous, non-ferrous, alloys, mining and techniques-surface mining, subsurface mining and types. Basic techniques of jewellery making-measurement, layout, sawing, drilling, filing.

Precious metals and their mining, methods of refinement and recovery, application in jewellery, quality control-lowering or raising metal quality, hallmarking, standard weights and measures.

### UNIT-3

#### **Gem trade**

#### **Selling Gemstones through their properties:**

Clarity, Colour, Cut, Carat Weight.

#### **Customer Interactions:**

Approach, Information Exchange, Demonstration Techniques, Value Enhancement, Sale approaches, Closure, Add-on Sales, Follow up.

### UNIT-4

#### **Security:**

Gem and Jewelry Related Giftware: Watches, Crystal pieces, Enamel pieces, figurines, desk accessories, cufflinks, China, Hollowware etc.

**Service:**

Knowledge, Repeat Sales, Personal Attention, Awareness, Care and cleaning, home care, Jewelry handling etc.

**UNIT-5**

**Hall marking and Gem Certification**

Pricing/ Valuation

Market Terms/ Indian Trade

# **FUNDAMENTALS OF JEWELLERY DESIGN-VI**

## **BVJD603**



# **ON JOB TRAINING/INTERNSHIP/WORKSHOP**

## **BVJD604P**



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