



**KALINGA
UNIVERSITY**

SCHEME & SYLLABUS FOR

**Bachelor of Vocational
Studies (B.Voc.)**

**Interior Designing &
Decoration**

(W.e.f. 2025 – 26)



Kalinga University, Naya Raipur, Chhattisgarh

B. VOC. IN INTERIOR DESIGNING & DECORATION

Semester-01								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD101	Services – I	3	3	0	0	30	70	100
BVIDD102	Theory of Materials	3	3	0	0	30	70	100
BVIDD103	Basic & Graphic Design	3	3	0	0	30	70	100
BVIDD104P	Interior Construction – I	2	0	0	4	20	30	50
BVIDD105P	Interior Design – I	2	0	0	4	20	30	50
BVIDD106P	On Job Training/Internship/Workshop	17	0	0	34	50	150	200
Total		30	9	0	42	180	420	600

Semester-02								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD201	Services – I	3	3	0	0	30	70	100
BVIDD202	Theory of Materials	3	3	0	0	30	70	100
BVIDD203P	Interior Construction – I	2	0	0	4	20	30	50
BVIDD204P	Interior Design – I	2	0	0	4	20	30	50
BVIDD205P	AutoCAD	2	0	0	4	20	30	50
BVIDD206P	On Job Training/Internship/Workshop	18	0	0	36	50	150	200
Total		30	6	0	48	170	380	550

Semester-03								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD301	Services – II	3	3	0	0	30	70	100
BVIDD302	Professional Practice & Estimation	3	3	0	0	30	70	100
BVIDD303P	Interior Construction – II	2	0	0	4	20	30	50
BVIDD304P	Interior Design – II	2	0	0	4	20	30	50
BVIDD305P	Photoshop	2	0	0	4	20	30	50
BVIDD306P	Google Sketchup	2	0	0	4	20	30	50
BVIDD307P	On Job Training/Internship/Workshop	16	0	0	32	50	150	200
Total		30	6	0	48	190	410	600

Semester-04								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD401	Services – II	3	3	0	0	30	70	100
BVIDD402	Professional Practice & Estimation	3	3	0	0	30	70	100
BVIDD403P	Interior Construction – II	2	0	0	4	20	30	50
BVIDD404P	Interior Design – II	2	0	0	4	20	30	50
BVIDD405P	3Ds Max & V Rays	2	0	0	4	20	30	50
BVIDD406P	On Job Training/Internship/Workshop	18	0	0	36	50	150	200
Total		30	6	0	48	170	380	550

Semester-05								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD501	Environmental Design	3	3	0	0	30	70	100
BVIDD502	Communication Skills	3	3	0	0	30	70	100
BVIDD503P	Thesis	2	0	0	4	20	30	50
BVIDD504P	Interior Construction – III	2	0	0	4	20	30	50
BVIDD505P	Interior Design – III	2	0	0	4	20	30	50
BVIDD506P	On Job Training/Internship/Workshop	18	0	0	36	50	150	200
Total		30	6	0	48	170	380	550

Semester-06								
Course Code	Course Title	Credits	L	T	P	Internal Marks	End Semester Exam Marks	Total Marks
BVIDD601	Environmental Design	3	3	0	0	30	70	100
BVIDD602	Environmental Studies	3	3	0	0	30	70	100
BVIDD603P	Thesis	2	0	0	4	20	30	50
BVIDD604P	Interior Construction – III	2	0	0	4	20	30	50
BVIDD605P	Interior Design – III	2	0	0	4	20	30	50
BVIDD606P	On Job Training/Internship/Workshop	18	0	0	36	50	150	200
Total		30	6	0	48	170	380	550

SEMESTER-01

SERVICES – I

BVIDD101

Unit 1:	06
Lighting –	
<ul style="list-style-type: none">• Introduction,• the measurements of light,• Wiring system & their suitability.	
Unit 2:	06
<ul style="list-style-type: none">• types of wires,• selection of wiring,• choice of wiring system,• various methods of wiring,	
Unit 3:	06
<ul style="list-style-type: none">• layout of wiring,• wiring diagram,• earthing,	
Unit 4:	06
Types of lighting:	
<ul style="list-style-type: none">• day light,• general lighting,• accent lighting,	
Unit 5:	06
<ul style="list-style-type: none">• task lighting,• LED lighting,• type of fixtures	

THEORY OF MATERIALS

BVIDD102

Unit 1:	06
• Clay - Bricks -Types, Terracotta, Ceramic, Qualities & Prosperities, Manufacturing, Application	
Unit 2:	06
• Stone – Types, Qualities & Properties, Processing & Application.	
Unit 3:	06
• Mortar - Lime, Cement – Types, Lime Mortar, Cement Mortar, Mud Mortar, Qualities & Properties, Processing & Application (like Terrazzo, Mosaic, cast stone),	
Unit 4:	06
• Types of concrete Blocks of coping, Shape of coping, Concrete Blocks, RCC-Introduction & Concept for lintels & Chajja	
Unit 5:	06
• Metals - Ferrous & Non- ferrous metals like Aluminium, Brass, Copper, mild steel, quality, Properties &Types, Surface treatment like anodizing, powder coating, specialized coating etc. Applications.	

BASIC & GRAPHIC DESIGN

BVIDD103

- Unit 1:** **06**
- Use of Drawing Instruments - Introduction, Use of drawing instruments, Sheet Fixing, Sheet Fixing
 - Study of Lines - Introduction, Study of line, Study of surface, Study of volumes with various gradations
 - Lettering Techniques - Double Stroke, Inclined Letters, Architectural Lettering
- Unit 2:** **06**
- Solid Geometry – All Geometrical Shapes
 - Importance of Interior Design - What is design, Importance
 - Element of Design – point, Line, Form - Definition & Example, Shape - Regular & irregular, Pattern – Definition, Colour - Colour Wheel, Space – Definition, Light - Different Light levels Shadow, Texture – definition, Types of texture
- Unit 3:** **06**
- Principles of Design – Introduction, Structural design, Decorative design, Balance, Harmony, Scale & proportion, Rhythm, Colour wheel, Emphasis
 - Standard Dimension & Drawing – Introduction, Furniture dimensions, Presentation of various furniture items, Types of furniture, Furniture drawing
 - Ergonomics & Anthropometric – Introduction, Introduction ergonomics & Anthropometrics.
- Unit 4:** **06**
- History of Interior Design – Introduction, Classic period, Medieval period, 19th century, Modern period, Oriental period, Indian interior design
 - Scale Drawing – Introduction, Use of Scales and Proportions, Measure drawing
 - Study of Orthographic Projections – Introduction, Study of Orthographic Projections
 - Views - Introduction, Isometric view, Axonometric View, Oblique View
 - Perspective View – Introduction, One Point, two point, Measuring Point Method
 - Study of Sociography - Shades & Shadows, Sociography Procedure, Point to Remember
- Unit 5:** **06**
- Presentation Techniques - Pencil Rendering, Colour Rendering, Pen Pencil (B & W), Pen & Ink
 - Model Making - Models of various Geometric forms, Study of Doors & Windows (mount board, Models with wall finishes), 1bhk/2bhk model (residential)

INTERIOR CONSTRUCTION – I

BVIDD104P

Unit 1:

- Stone Masonry - Stone, Types of stone, Bonds, Qualities & Properties, Types of stone masonry

Unit 2:

- Brick Masonry - Brick Masonry, Types of bricks (Terracotta, ceramic, etc., Qualities & Properties, Brick joints, Types of bonds, English Bond, Flemish Bond

Unit 3:

- Load Bearing Structures – Foundation, Types of foundation, Super structure, Element of super structure, Structure plan and elevation

Unit 4:

- Framed Structure - Rigid frame, Braced, Gabled, Portal, Components in RCC frame structure, RCC foundation, RCC beam, RCC column, RCC Slab, RCC staircase (Detailing), Ceiling framing (working drawing), Kitchen (platform)

Unit 5:

- Opening in Masonry Work – Lintel – Introduction, classification of lintels

INTERIOR DESIGN – I

BVIDD105P

Unit 1:

- **Residential Project** - 2BHK - Layout Explanation, Measurement Technique, Anthropometric Human Data, Scale Conversion, Dimension Theory

Unit 2:

- **Living Room** – Introduction, Design Guideline for living room, Dimension Theory

Unit 3:

- **Kitchen cum dining area** – Introduction, Design Guideline for Kitchen cum dining area, Dimension Theory

ON JOB TRAINING/INTERNSHIP/WORKSHOP

BVIDD106P

SEMESTER-02

SERVICES – I

BVIDD201

Unit 1:	06
Environmental Consideration like Energy Efficiency:	
<ul style="list-style-type: none">• Introduction,• sustainable energy,• solar energy,• architecture & urban planning,	
Unit 2:	06
<ul style="list-style-type: none">• agriculture & horticulture,• solar thermal,• water heating,• water treatment	
Unit 3:	06
Ventilation & Air Conditioning:	
<ul style="list-style-type: none">• Introduction,• principles of heat transfer,	
Unit 4:	06
<ul style="list-style-type: none">• principles of air conditioning or cooling,• air conditioning air cycle,• ventilation,	
Unit 5:	06
<ul style="list-style-type: none">• extra circulatory system,• packaged air,• Change in Temperature & Heating,• Principles of ducting & distributing.	

THEORY OF MATERIALS

BVIDD202

- Unit 1:** **08**
- **Fixture & Fasting** - types of Paints, Polishes & Texture finishing, Wall Papers Cladding material, Types of plastering & finishes, upholstery- fabric curtains, venetian blinds
- Unit 2:** **08**
- **Timber** - Types of timber used for furniture or interiors, used for construction / structure, Properties, defects in timber, product, plywood, Block board, Particle Board, MDF, Fire Boards, Laminates -Types & Texture, thickness etc.
- Unit 3:** **07**
- **Artificial Materials** - Acrylic plastic, polycarbonate, polyurethane, artificial, woods, Eco - Friendly and Recycled material, Water Proofing, Fire Fitting & Fire Prevention, acoustical, Thermal insulations, Light weight construction material
- Unit 4:** **07**
- **Glass** - Qualities, Properties & Types, Manufacturing, Processing & Applications.

INTERIOR CONSTRUCTION – I

BVIDD203P

Unit 1:

- Opening in Masonry Work – Arches -
- Classification of Arches

Unit 2:

- Types of arches
- Joinery Details - Different methods of joinery, Structures of joints, Different types of joinery

Unit 3:

- Introduction of Various Fasteners - Try square, Types of saws, Various methods of fastening

Unit 4:

- Types of Doors – Introduction, types of doors, Hinges

Unit 5:

- Typical T.W detailed door – detailing

INTERIOR DESIGN – I

BVIDD204P

Unit 1:

- **Bedrooms** - Design Guideline for Bedroom, types of bedrooms, Dimension Theory

Unit 2:

- **Washroom** - Design Guideline for washroom, types of washrooms, Dimension Theory

AUTOCAD

BVIDD205P

Unit 1:

- Introduction
- Auto - CAD user Interface
- Draw
- Modify

Unit 2:

- Properties
- Drafting Setting
- Dimension
- Style
- Layer

Unit 3:

- Productivity Tools /Block
- Co-ordinate System
- 3 D Drawing
- View

Unit 4:

- Visual Style
- Creating Solid Primitive Objects
- 3D Concept
- Modelling
- Solid Editing

Unit 5:

- Render
- Lights
- Camera & Animation
- Project
- Plans
- Plotting & Printing

ON JOB TRAINING/INTERNSHIP/WORKSHOP

BVIDD206P

SEMESTER-03

SERVICES – II

BVIDD301

Unit 1:	08
• Water Supply – Uses, Sources, Rain water harvesting, System of water supply, Water distribution system	
Unit 2:	08
• Hot Water System - Hot water requirement, Types of water heaters, Safety features in hot water supply, Hot water Storages	
Unit 3:	07
• Plumbing - Ablution fixtures, Soil fixtures, Water distribution system, Drainage system,	
Unit 4:	07
• Landscaping - Elements of Landscaping, Principles of Landscaping, Garden & their types, Selection of plants, Types of plants, Plant Care, Landscape Lighting	

PROFESSIONAL PRACTICE & ESTIMATION

BVIDD302

Unit 1:	08
Introduction:	
<ul style="list-style-type: none">Professional Ethics, Conduct & responsibility of profession, Responsibility towards Clients, Responsibility towards Contractor, Responsibility of professional	
Unit 2:	08
Office Management:	
<ul style="list-style-type: none">Introduction, Office management & office, Selection of Right Person, Order of Accelerate, Supervisor & Delegation	
Unit 3:	07
Project Management:	
<ul style="list-style-type: none">Project Initiation, Project Planning, Project Execution, Control & Validation, Close out & Evaluation, Project management triangle, Time, Cost, Scope, Establishment & financial implications, Maintenance & Refreshment, Introduction to Site Management, Project Resourcing, Time Management	
Unit 4:	07
Career Opportunities:	
<ul style="list-style-type: none">types of opportunities, Scope of career	

INTERIOR CONSTRUCTION – II

BVIDD303P

Unit 1:

Staircase:

- Types of staircases, Types of materials used in staircase

Floors:

- Types & Materials - types of different floor finishes, Method of Installation of flooring, flooring joints

Unit 2:

False Ceiling:

- Types of false ceiling material in used, Details of false ceiling

Unit 3:

Speciality Partitions & Panelling:

- material used in partition & panelling, panelling & their detail

Unit 4:

Study of Chair with Costing:

- Types chairs

Unit 5:

Study of Space Dividers with Coasting:

- Types of space dividers, material used in space dividers

INTERIOR DESIGN – II

BVIDD304P

Unit 1:

- Civil plan
- cabins

Unit 2:

- conference room
- meeting room
- work station

Unit 3:

- peon station
- Bathroom.

Unit 4:

- measurement plan
- plan with details-naming

Unit 5:

- Ceiling plan
- Ceiling plan rendering
- Electrical layout

PHOTOSHOP

BVIDD305P

Unit 1:

- Introduction
- Selection Tools
- Cropping images

Unit 2:

- Colour Pickers Tool
- Retouching Tools
- Pattern Tools

Unit 3:

- Erase Tools
- Colour Effects Tools

Unit 4:

- Pen Tool
- Text Effects
- Blending Mode

Unit 5:

- Menu Bar
- Project Name

GOOGLE SKETCHUP

BVIDD306P

Unit 1:

- Introduction
- Standard,

Unit 2:

- Draw,
- Material,
- Edit,

Unit 3:

- Import,
- Construction
- Section

Unit 4:

- Camera
- Views
- Style
- Solid tool

Unit 5:

- Shadow
- Animation
- Render
- Project

ON JOB TRAINING/INTERNSHIP/WORKSHOP

BVIDD307P

SEMESTER-04

SERVICES – II

BVIDD401

Unit 1:

Acoustics:

- Study of different systems of insulations & sound proofing, Methods, Application, types

Unit 2:

Fire Fightings:

- Types of fire, firefighting equipment, firefighting system

Unit 3:

Security System:

- Introduction, Alaram System, Detector, types of safes

PROFESSIONAL PRACTICE & ESTIMATION

BVIDD402

Unit 1:	08
Introduction:	
<ul style="list-style-type: none">Professional Ethics, Conduct & responsibility of profession, Responsibility towards Clients, Responsibility towards Contractor, Responsibility of professional	
Unit 2:	08
Office Management:	
<ul style="list-style-type: none">Introduction, Office management & office, Selection of Right Person, Order of Accelerate, Supervisor & Delegation	
Unit 3:	07
Project Management:	
<ul style="list-style-type: none">Project Initiation, Project Planning, Project Execution, Control & Validation, Close out & Evaluation, Project management triangle, Time, Cost, Scope, Establishment & financial implications, Maintenance & Refreshment, Introduction to Site Management, Project Resourcing, Time Management	
Unit 4:	07
Career Opportunities:	
<ul style="list-style-type: none">types of opportunities, Scope of career	

INTERIOR CONSTRUCTION – II

BVIDD403P

Unit 1:

- Study of Built-In-Furniture- Wardrobe

Unit 2:

- Study of Dining Table with Costing
- Study of Wall Units with Costing,

Unit 3:

- Study of Curtain Types with Costing,
- Study of Counters Of Bars with Costing,

Unit 4:

- Study of Bank Executive Tables with Costing,

Unit 5:

- Study of Conference Tables with Costing

INTERIOR DESIGN – II

BVIDD404P

Unit 1:

- Plumbing Layout

Unit 2:

- Elevations

Unit 3:

- Views

Unit 4:

- Schedules

Unit 5:

- Detailing

3DS MAX & V RAYS

BVIDD405P

Unit 1:

- Introduction
- Geometry
- Splines

Unit 2:

- Modifiers
- Editable Poly
- Introduction to Material Texture map

Unit 3:

- Assignment
- Light
- Camera

Unit 4:

- Camera Animation
- Rendering Setup
- Rendering

Unit 5:

- Final Project

ON JOB TRAINING/INTERNSHIP/WORKSHOP

BVIDD406P

SEMESTER-05

ENVIRONMENTAL DESIGN

BVIDD501

- Unit 1:** **08**
Sustainability:
- what is sustainability, what are the core principles of sustainable (environmental) design, Sustainable environment, Sustainable materials, Source of Materials, Selection of sustainable materials, Sustainable Interior Design, Sustainable design element
- Unit 2:** **08**
Energy and Water Efficiency:
- Methods for ensuring energy efficiency in buildings, Energy efficient designing methods in the prebuilding phase, appropriate site selection, Site planning, Building form, Building plan and appropriate space organization, Building envelope, Choosing energy-efficient building materials, Energy-efficient landscape design, Usage renewable energy resources, Energy Efficiency, Green Building Architecture, case study of one of the Energy Efficient Buildings in India, What Is Water Efficiency?, Water Efficiency In Green Buildings, Green Building Rating Systems for Water Efficiency, Key Components of Water Efficiency In Green Buildings, Water Efficient Technologies, Necessity for Water Efficiency, Demand versus Supply
- Unit 3:** **07**
Residential Green Design:
- Location, Size, Orientation, Layout, Local materials, Recycled materials, Insulation, Air sealing, Window & Door selection, Sustainable materials, Energy star appliances, LED lighting, Water Conserving Fixtures, Efficient HVAC, Recycle Your Energy, Rain Water Collection, Renewable Energy, Solar Hot Water, Intelligent Planting, Build to Last
- Unit 4:** **07**
Human comfort in built form and environment:
- Definition of climate and elements of climate, built environment, impact and issues of climatic balance in traditional and contemporary built environments, Effect of climate on human comfort, Climatic factors which affect thermal comfort in humans, along with its interface with Interiors.

COMMUNICATION SKILLS

BVIDD502

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 outcomes:

- The purpose of this course is to introduce students to the theory, fundamentals and tools of communication
- To develop vital communication skills which should be integral to personal, social and professional interactions.
- One of the critical links between human beings.
- 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.

Unit 1:

06

- **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 2:

06

- **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 3:

06

- **Speaking Skills:** Monologue dialogue group discussion effective communication/ mis-communication interview public speech, regional influences on English, convergence and divergence, linguistic imperialism

- Unit 4:** **06**
- **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 5:** **06**
- **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.

References:

- Fluency in English - Part II, Oxford University Press, 2006.
- Business English, Pearson, 2008.
- Language, Literature and Creativity, Orient Blackswan, 2013.
- Language through Literature (forthcoming) ed. Dr. Gauri Mishra, Dr. Ranjana Kaul, Dr. Brati Biswas

THESIS

BVIDD503P

Unit 1:

- Review of Literature
- Case Studies
- Case Study No. 1
- (Local)

Unit 2:

- Case Study No. 2
- (International)

Unit 3:

- Actual Site Analysis
- Data Collection
- Interior Solutions/Environmental Aspects
- Water Conservation
- Rainwater Harvesting
- Electricity Conservation
- Solar Energy

Unit 4:

- Green Goals Present Challenges to Acoustical Design
- Power Requirements
- Battery Backup of Power
- Extensions & Recommendations
- Conclusions / Design Brief

Unit 5:

- Design Portfolio
- List of Tables
- List of Figures
- References
- Software's
- Model Making of Actual Project

INTERIOR CONSTRUCTION – III

BVIDD504P

Unit 1:

Introduction to Modular:

- Modular/Knockdown Furniture in Front office area of bank
- Modular/Knockdown Furniture in Back office of bank
- Modular/Knockdown Furniture in Bank's Extension Counter
- Modular/Knockdown Furniture in Bank's Visitors & Waiting Area
- Modular/Knockdown Furniture in Bank's Meeting & Conf. Room
- Modular/Knockdown Furniture of Cash Counter in Bank
- Modular/Knockdown Furniture in ATMs of Bank
- Modular/Knockdown Partitions & Cabins in Entire Area of Banks
- Modular/Knockdown False Ceiling in Entire Area of Banks
- Modular/Knockdown Stationary Storage Cabinets in Banks
- Modular/Knockdown Furniture in Front Area of Restaurant
- Modular/Knockdown Furniture in Garden Restaurant
- Modular/Knockdown Furniture in Fast Food Centres
- Modular/Knockdown Furniture in Ice Cream Parlor
- Modular/Knockdown Furniture in Terrace Restaurant
- Modular/Knockdown Partitions & Cubicles Restaurant
- Modular/Knockdown Mobile Restaurant
- Modular/Knockdown Food Grains & Vegetable Storages
- Modular/Knockdown Front Area of Corporate Office
- Modular/Knockdown Furniture in Back Area in Corporate Office
- Modular/Knockdown in Branch & Customer Service Centre
- Modular/Knockdown Visitor's & Waiting Area in Corporate Office
- Modular/Knockdown Conference Room in Corporate Office
- Modular/Knockdown Cash Counter in Corporate Office
- Modular/Knockdown Partitions & Cabins in Corporate Office
- Modular/Knockdown False Ceiling in Corporate Office
- Modular/Knockdown Stationery Storages in Corporate Office
- Modular/Knockdown Officer's Cubicles in Corporate Office
- Modular/Knockdown Furniture in Front office area of Exhibition Halls

INTERIOR DESIGN – III

BVIDD505P

Unit 1:

Spa & Salon:

- Introduction, Types of spa & salons, Standard dimensions of spa & salon designing, Case Studies, Existing Layout, Civil Changes Layout, Concept Sheet, Furniture Layout, Elevations – 6, Flooring Layout, False Ceiling Layout, Electrical Layout, Plumbing Layout, Perspectives, Material Chart, Model

Unit 2:

Café:

- Introduction, Types of Cafés, Standard dimensions of cafe designing, Case Studies, Existing Layout, Civil Changes Layout, Concept Sheet, Furniture Layout, Elevations – 6, Flooring Layout, False Ceiling Layout, Electrical Layout, Plumbing Layout, Perspective, Material Chart, Model

ON JOB TRAINING/INTERNSHIP/WORKSHOP

BVIDD506P

SEMESTER-06

ENVIRONMENTAL DESIGN

BVIDD601

- Unit 1:** **08**
Natural Light:
- Importance of day lighting, IAQ its application and ventilations, Daylight factor, size of opening with reference to daylight, lighting in buildings, light and its sources, lighting criteria, artificial lighting levels for various activities, calculation for lighting levels, Lighting design and energy usage, conservation of energy.
- Unit 1:** **08**
Design of built environment with respect to services:
- Natural ventilation and its importance, Design of openings to achieve comfort, Air cooling systems- passive and evaporative cooling, desert coolers, ducting and air distribution, Air-conditioning- functions and principles, refrigeration cycle, capacity of AC, types of AC systems and their details, ducting and air distribution, AC layouts for office spaces-load calculations with details of ducting.
- Unit 3:** **07**
Eco-Friendly Materials:
- Importance of materials in the Interiors, Properties of materials., Introduction to sustainable material, Concept of Reduce-Reuse – Recycle, Properties of materials and heat transfer, Evaluation of materials on environmental aspects, Innovative eco-friendly materials for interiors.
- Unit 4:** **07**
Rating Systems and EPA:
- green buildings certification, carbon credits, Understanding of LEED, GRIHA, Leadership in energy and environmental design, Concept of EPA Environmental Protection Act, Environment Impact Assessment, Basic concepts, objective and methodology of EIA, Objectives and requirement of Environmental Management, System (ISO-14000) (An Introduction).

ENVIRONMENTAL STUDIES

BVIDD602

Course Outcomes:

- Master core concepts and methods from ecological and physical sciences and their application in environmental problem solving.
- Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
- Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.
- Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.
- Master core concepts and methods from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.

Unit 1:

06

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 the ecosystem;
- **Energy flow in an ecosystem:** food chains, food webs and ecological succession.
- **Case studies of the following ecosystems:** Forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-2:

06

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: **06**

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: **06**

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: **06**

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).

References:

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THESIS

BVIDD603P

Unit 1:

- Review of Literature
- Case Studies
- Case Study No. 1
- (Local)

Unit 2:

- Case Study No. 2
- (International)

Unit 3:

- Actual Site Analysis
- Data Collection
- Interior Solutions/Environmental Aspects
- Water Conservation
- Rainwater Harvesting
- Electricity Conservation
- Solar Energy

Unit 4:

- Green Goals Present Challenges to Acoustical Design
- Power Requirements
- Battery Backup of Power
- Extensions & Recommendations
- Conclusions / Design Brief

Unit 5:

- Design Portfolio
- List of Tables
- List of Figures
- References
- Software's
- Model Making of Actual Project

INTERIOR CONSTRUCTION – III

BVIDD604P

Unit 1:

- Modular/Knockdown Furniture in Exhibition cum Sale Area
- Modular/Knockdown Furniture of Stalls in Exhibition Area
- Modular/Knockdown Furniture of Open Type Stalls in Exhibition
- Modular/Knockdown Vertical Display Panels cum Partitions
- Modular/Knockdown Furniture in Books Exhibition cum Sale
- Modular/Knockdown Furniture in Art Gallery Area
- Knockdown Foldable Partitions and Cubicles in Exhibition Halls
- Modular/Knockdown Furniture in Large Scale Exhibition Halls
- Modular/Knockdown Storage Cabinets in Exhibition Halls
- Modular/Knockdown Furniture of Cash Counter in Shopping Malls
- Modular/Knockdown Furniture in Garments Area of Malls
- Modular/Knockdown Furniture in Extension Counters of Malls
- Modular/Knockdown False Ceiling in Shopping Malls
- Modular Kitchens with Trolleys
- Modular Kitchens with Grains/Utensils Storage
- Modular Kitchens in “L” Shape
- Modular Kitchen in “C” Shape
- Modular Kitchens with Electrical Gadgets
- Modular Kitchens with Tower Units
- Modular/Knockdown Table in Conference Hall
- Modular/Knockdown False Ceiling in Conference Hall
- Modular/Knockdown Storage Cabinet in Conference Hall
- Modular/Knockdown Display Panels in Conference Hall
- Modular/Knockdown Video Presentation in Conference Halls
- Modular/Knockdown Wall Panelling in Conference Halls
- Modular/Knockdown Service Trolleys in Conference Halls

Unit 2:

- Foldable Furniture in Photo Sound Recording Studio
- Modular/Knockdown Furniture in Photo/Sound Recording Studio
- Foldable Partitions in Photo/Sound Recording Studio

Unit 3:

- Knockdown False Ceiling in Photo/Sound Recording Studio
- Modular/Knockdown Storages in Photo/Sound Recording Studio
- Vertical Storage Systems in Residential Kitchens

Unit 4:

- Dining Area in Residential Kitchens
- Living cum Dinning cum Kitchens
- Modular/Knockdown Preparation Platform in Residential Kitchen
- Modular/Knockdown Cooking Platform in Residential Kitchen
- Modular Storage in Kitchen Platforms
- Types of Kitchens

INTERIOR DESIGN – III

BVIDD605P

Unit 1:

Studio:

- Introduction, Types of studios, Standard dimensions of studio designing, Case Studies

Unit 2:

Boutique:

- Introduction, Types of Boutiques, Standard dimensions of boutique designing, Case Studies

Unit 3:

Gym:

- Introduction, Types of Gym, Standard dimensions of gym designing, Case Studies

ON JOB TRAINING/INTERNSHIP/WORKSHOP

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RAIPUR | INDIA

KALINGA UNIVERSITY

KALINGA UNIVERSITY, KOTNI , NEAR MANTRALAYA, NAYA RAIPUR - 492101, CHHATTISGARH

CALL: +91-9907252100