

**As per the NEP 2020
(Effective from Academic Year 2024-2025 onwards)**

**Skill Enhancement Courses
Faculty of Arts/Commerce/Science
Semester - III**

For Under-Graduate Programmes



**Pandit Deendayal Upadhyaya Shekhawati University
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Semester – III

Course Code	Course Title	Contact Hrs per Week			Credits	Weightage (%)		
		L	T	P		CWS	MTE	ETE
24BSC6301T	Calligraphy	3	0	0	3	10	20	70
24BSC6302T	Digital World	3	0	0	3	10	20	70
24BSC6303T	Apiculture	3	0	0	3	10	20	70
24BSC6304T	Healthy and Sustainable Food Choices	3	0	0	3	10	20	70
24BSC6305T	Radiation Safety	3	0	0	3	10	20	70
24BSC6306T	Laboratory Operations and Safety Measures	3	0	0	3	10	20	70
24BSC6307T	Graphics Design & 2D Animation	3	0	0	3	10	20	70
24BSC6308T	Ecotourism	3	0	0	3	10	20	70

Course Objectives:

The Learning Objectives of this course are as follows:

- To teach students the art of Calligraphy.
- To make students better at handwriting and embellish the scripts.
- To help the students communicate with creativity.

Course Outcomes:

The Learning Outcomes of this course are as follows:

- Students will be skilled in calligraphy scripts.
- Learning flourishing will help to develop good writing.
- Practice sessions will further a project at the end of the semester.
- Will induce skills to set up a business, too.

Course Title:	Calligraphy	Course Code: 24BSC6301T
Total Lecture hour 45		
Unit I	Introduction to Calligraphy	Hours
	Definition, History of calligraphy, Calligraphy at the Global level, Types of Calligraphy: Classical Calligraphy & Modern Calligraphy Practice Sessions: Introducing students to Calligraphy and its types through images, videos and animations.	12
Unit II	Introduction to the Writing tools	Hours
	Tool Kit, Different Types of Pens, Different Types of Nibs, Different Types of Brushes, Different Types of Inks Practice Sessions: Display of Writing items, Discussion on the usage of different types pens, nibs and brushes through hands-on activities	12
Unit III	Foundation to Calligraphy -I	Hours
	How to write letters?, Majuscules, Miniscules, Numbers, Learning Strokes, Sans Serif B- point, Celtic, Italian Script, Roman Script, Gothic Script, Practice Sessions: Learning and practicing strokes- Upstroke, Downstroke, Overturn, Underturn, Compound curve, Oval, Ascending loop	11


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Unit IV	Foundation to Calligraphy -II Hands-on activities and Assessment on Sans Serif B-point, Celtic, Italian Script, Roman Script, Gothic Script, Flourishing	10
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Reference and Reading Books:

1. Suepsuan, P.A. (2021). Start Calligraphy The Right way to write: Learn Calligraphy The Complete Book - Modern Calligraphy Pen For Beginners; Learning Resources Step By Step Number Line, Mastering Modern Calligraphy. Independently published.
2. C., &Co., T. P. (2020). Modern Calligraphy Set for Beginners: A Creative Craft Kit for Adults featuring Hand Lettering 101 Book, Brush Pens, Calligraphy Pens, and More. Paige Tate & Co.

Course Title:	Digital World	Course Code: 24BSC6302T
Total Lecture hour: 45		Hours
Unit I	Marketing in the Digital World Digital marketing: Concept, Features, Difference between traditional and digital marketing, Moving from traditional to digital Marketing; Digital Marketing Channels: Intent Based-SEO, Search Advertising; Brand Based-Display Advertising; Community Based-Social Media Marketing; Others- Affiliate, Email, Content, Mobile. Customer Value Journey: 5As Framework; The Ozone 03ConceptKey; Traits of online consumer	12
Unit II	Content and Email Marketing Content Marketing: Step-by-step Content Marketing Developing a content marketing strategy Email Marketing: Types of Emails in email marketing, Email Marketing best practices	12
Unit III	Social Media Marketing Social Media Marketing: Building. Successful Social Media strategy; Social Media Marketing Channels; Facebook, Linked in, YouTube (Concepts and strategies)	11
Unit IV	Display Marketing Display Adveilling: Working of Display Advertising; Benefits and challenges; Overview of Display ad Process.; Define- Customer, Publisher, Objectives; Format-Budget, Media, Ad Formats, Ad Copy.	10

Reference and Reading Books:

1. Moutusy Maity: Internet Marketing: A practical approach in the Indian Context: Oxford Publishing
2. Seema Gupta: Digital Marketing: Mcgraw Hill
3. Ultimate guide to digital Marketing by Digital Marketer

Learning Objectives

The Learning Objectives of this course are as follows:

- To help the student become familiar with the significance of beekeeping as an economically viable industry.
- It will help them to understand the different species of honeybees, their biology, behavior and role in pollination.
- To train the students to learn the techniques of honey bee rearing, optimization of techniques based on climate and geographical regions, and various measures to be taken to maximize the benefits.
- To understand the significance of beekeeping in the diversification of agriculture for the rural communities to increase their income and create employment opportunities, and at the same time to develop entrepreneurial skills required for self-employment in the beekeeping sector.

Course Outcomes

By the end of the course, the students will be able to:

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- Comprehend the various species of honeybees in India, their social organization and its importance.
- Appreciate the opportunities and employment in apiculture – in public, private and government sectors.
- Gain thorough knowledge about the techniques involved in beekeeping and honey production.
- Make various products and by-products obtained from the beekeeping sector and their importance.
- Develop entrepreneurial skills necessary for self-employment in the beekeeping sector.
- Enhance collaborative learning and communication skills through practical sessions, teamwork, group discussions, assignments, and projects.

Course Title:	Apiculture	Course Code: 24BSC6303T
Total Lecture hour: 45		Hours
Unit I	Introduction to Beekeeping Historical background of apiculture, classification and biology of honey bees, Social organization of bee colony, behavioral patterns (bee dance, swarming). Demonstration <ol style="list-style-type: none"> 1. Study of the life history of honey bees: <i>Apis cerana indica</i>, <i>Apis mellifera</i>, <i>Apis dorsata</i>, <i>Apis florea</i>, <i>Melipona sp.</i> from specimen/photographs - Egg, larva, pupa, adult (queen, drone, worker). 2. Study of morphological structures of honey bees through permanent slides/photographs – mouthparts, antenna, wings, sting apparatus and temporary mount of legs (antenna cleaner, mid leg, pollen basket). 3. Study of natural beehive and identification of queen cells, drone cells and brood. 	12
Unit II	Rearing of Bees Artificial Bee rearing (Apiary), Beehives – Newton and Langstroth; Bee Pasturage; Selection of bee species for apiculture – <i>Apis cerana indica</i> , <i>Apis mellifera</i> ; Beekeeping equipment methods of extraction of honey (Indigenous and Modern) & processing; Apiary management - Honey flow period and lean period, effects of pollutants on honeybees. Demonstration <ol style="list-style-type: none"> 1. Distinguishing characters of workers of three bee species. 2. Importance of site selection for beekeeping. 3. Study of an artificial hive (Langstroth/Newton), its various parts and beekeeping equipment: draw diagrams of bee boxes proportionate to the body size and measure the body length and wing size. 4. Preparation of mount of pollen grains from flowers. 	12
Unit III	Beekeeping Health and Diseases Bee diseases control and preventive measures: enemies of bees and their control. Demonstration <ol style="list-style-type: none"> 1. Diagnosis of honey bee diseases: Protozoan diseases, Bacterial diseases, Viral diseases (one each) - symptoms, nature of damage and control. 2. Identification of honey bee enemies: Predators - Insects and non-insects. 	10
Unit IV	Bee Economy & Entrepreneurship in Apiculture Products of apiculture industry (Honey, Bees Wax, Propolis, Royal Jelly, Pollen etc.) and their uses; Modern methods in employing artificial Beehives for cross-pollination in horticultural gardens- stationary and migratory beekeeping. Beekeeping industries – Recent advancements, employment opportunities, economics in small and large-scale beekeeping, scope for women entrepreneurs in beekeeping sector, study of development programs and organizations involved in	11

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	beekeeping in India. Demonstration <ol style="list-style-type: none"> 1. Video demonstration of wax extraction and preparation of comb foundation sheets. 2. Analysis of honey – purity, physical and biochemical parameters (any two constituents). Study of bee pasturage – visit to fields/gardens/orchards for studying the bee activity (role in pollination, nectar collection, videography of honeybee activity) and preparation of herbarium of nectar and pollen yielding flowering plants (floral mapping).	
Reference and Reading Books:		
<ol style="list-style-type: none"> 1. Singh, S. (1962). Beekeeping in India, Indian Council of Agricultural Research, New Delhi. 2. Mishra, R.C. (1995). Honeybees and their management in India. Indian Council of Agricultural Research, New Delhi. 3. Prost, P.J. (1962). Apiculture. Oxford and IBH, New Delhi. 4. Rahman, A. (2017). Beekeeping in India. Indian Council of Agricultural Research, New Delhi. 5. Gupta, J.K. (2016). Apiculture, Indian Council of Agricultural Research, New Delhi. 		

Learning Objectives

The Learning Objectives of this course are as follows:

- To identify healthier food options
- To understand portion control for foods
- To demonstrate skill for preparing healthy and nutritious dishes
- To link sustainability with healthy food choices

Learning Outcomes

The Learning outcomes of this course are as follows:

- To be able to select and prepare healthier food options
- To relate the influence of food environment on food choices
- To comprehend the importance of sustainable food choices

Course Title:	Healthy and Sustainable Food Choices	Course Code: 24BSC6304T
Total Lecture hour: 45		
		Hours
Unit I	Healthy Food Choices Identification of healthy and unhealthy foods and Understanding the immediate food environment <ul style="list-style-type: none"> • Food labels and basics of nutrient profiling models to classify foods as HFSS • Nutrient profiling of commonly consumed food items • Exploring the food environment by mapping the food outlets and food available near home and college 	12
Unit II	Food Portion Sizes and Related Factors Understanding food portion sizes and its relation to nutrient density <ul style="list-style-type: none"> • The concept of portion/serving sizes and portion control • Estimation of energy and nutrient density of selected food products using nutrient composition database 	12
Unit III	Basics of Food Preparation Planning and preparation of healthy and nutritious dishes <ul style="list-style-type: none"> • Planning and preparation of the following: <ul style="list-style-type: none"> • Snacks • Soups and Salads • Desserts 	11


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	<ul style="list-style-type: none"> Meal combinations 	
Unit IV	Sustainability and Healthy Food Linking the concept of healthy eating with sustainability <ul style="list-style-type: none"> Identification of nutritious food sources which have minimal impact on the environment Case study on understanding food supply chain and carbon footprints of any commonly consumed foods 	10
Reference and Reading Books: <ol style="list-style-type: none"> Chadha R and Mathur P (2015). <i>Nutrition - A Lifecycle Approach</i>. New Delhi: Orient Blackswan Pvt Ltd. Longvah T, Ananthan R, Bhaskarachary K and Venkaiah K (2017). <i>Indian Food Composition Tables</i>. National Institute of Nutrition, Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India, Hyderabad. Khanna K, Gupta S, Seth R, Mahna R, Rekhi T (2004). <i>The Art and Science of Cooking: A Practical Manual</i>, Revised Edition. New Delhi: Elite Publishing House Pvt Ltd. Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). <i>Basic Food Preparation: A Complete Manual</i>, Fourth Edition. Hyderabad: Orient Black Swan. HLPE. 2017. <i>Nutrition and food systems</i>. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. https://www.fao.org/3/i7846e/i7846e.pdf 		

Course Objectives:

- This course focuses on the applications of nuclear techniques and radiation protection.
- It will not only enhance the skills towards the basic understanding of radiation but will also provide knowledge about the protective measures against radiation exposure.
- It imparts all the skills required by a radiation safety officer or any job dealing with radiation such as X-ray operators, jobs dealing with nuclear medicine: chemotherapists, operators of PET, MRI, CT scan, gamma camera, etc.

Course Outcomes:

This course will help students in the following ways:

- Awareness and understanding of the hazards of radiation and the safety measures to guard against these hazards.
- Having a comprehensive knowledge about the nature of interaction of matter with radiations like gamma, beta, alpha rays, neutrons, etc., and radiation shielding by appropriate materials.
- Knowing about the units of radiation and their safety limits, the devices to detect and measure radiation.
- Learning radiation safety management, biological effects of ionizing radiation, operational limits, and basics of radiation hazards evaluation and control, radiation protection standards.
- Learning about the devices that apply radiation in medical sciences, such as X-ray, MRI, PET, and CT-scan.

Course Title:	Radiation Safety	Course Code: 24BSC6305T
Total Lecture hour: 45		Hours
Unit I	Radiation and its interaction with matter: Basic idea of different types of radiation electromagnetic (X-ray, gamma rays, cosmic rays etc.), nuclear radiation and their origin. Nuclear Radiation: Basic idea of Alpha, Beta, Gamma, neutron radiation and their sources (sealed and unsealed sources). Interaction of Charged Particles (including alpha particles): Heavy charged particles (e.g. accelerated ions) - Beth-Bloch Formula, Scaling laws, Mass Stopping Power, Range, Straggling. Interaction of Beta Particles: Collision and Radiation loss (Bremsstrahlung). Interaction of Photons: Linear and Mass Attenuation Coefficients. Interaction of	12


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	Neutrons: Collision, slowing down and Moderation.	
Unit II	Radiation detection and monitoring devices: Basic concepts and working principle of gas detectors, Scintillation Detectors, Solid State Detectors and Neutron Detectors, Thermo-luminescent Dosimetry. Radiation Quantities and Units: Basic idea of different units of activity, KERMA, exposure, absorbed dose, equivalent dose, effective dose, collective equivalent dose, annual limit of intake (ALI) and derived air concentration (DAC).	12
Unit III	Radiation Units, dosage and safety management: Basic idea of different units of activity, KERMA, exposure, absorbed dose, equivalent dose, effective dose, collective equivalent dose, annual limit of intake (ALI) and Derived air concentration (DAC). Radiation safety management: Biological effects of ionizing radiation, Operational limits and basics of radiation hazards, its evaluation and control: radiation protection standards.	11
Unit IV	Application of radiation as a technique: Application in medical science (e.g., basic principles of X-rays, MRI, PET, CT scan, Projection Imaging Gamma Camera, Radiation therapy), Archaeology, Art, Crime detection, Mining and oil. Industrial Uses: Tracing, Gauging, Material Modification, Sterilization, Food preservation.	10
	Demonstration Minimum five experiments need to be performed from the following, graphs to be plotted using any graphical plotting software <ol style="list-style-type: none"> 1. Estimate the energy loss of different projectiles/ions in Water and carbon, using SRIM/TRIM etc. simulation software, (different projectiles/ions to be used by different students). 2. Simulation study (using SRIM/TRIM or any other software) of radiation depth in materials (Carbon, Silver, Gold, Lead) using H as projectile/ion. 3. Comparison of interaction of projectiles with $ZP = 1$ to 92 (where ZP is atomic number of projectile/ion) in a given medium (Mylar, Carbon, Water) using simulation software (SRIM etc). 4. SRIM/TRIM based experiments to study ion-matter interaction of heavy projectiles on heavy atoms. The range of investigations will be $ZP = 6$ to 92 on $ZA = 16$ to 92 (where ZP and ZA are atomic numbers of projectile and atoms respectively). Draw and infer appropriate Bragg Curves. 5. Calculation of absorption/transmission of X-rays, γ-rays through Mylar, Be, C, Al, Fe and $ZA = 47$ to 92 (where ZA is atomic number of atoms to be investigated as targets) using XCOM, NIST (https://physics.nist.gov/PhysRefData/Xcom/html/xcom1.html). 6. Study the background radiation in different places and identify the source material from gamma ray energy spectrum. (Gamma ray energies are available in the website http://www.nndc.bnl.gov/nudat2/). 7. Study the background radiation levels using Radiation meter. 8. Study of characteristics of GM tube and determination of operating voltage and plateau length using background radiation as source (without commercial source). 9. Study of counting statistics using background radiation using GM counter. 10. Study of radiation in various materials (e.g. KSO₄ etc.). Investigation of possible radiation in different routine materials by operating GM counter at operating voltage. 11. Study of absorption of beta particles in Aluminum using GM counter. 12. Measurement of gamma ray attenuation co-efficient of aluminum using GM counter. 13. Estimation of half thickness for aluminum using GM Counter. 	
Reference and Reading Books:		


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1. Basic Ideas and Concepts in Nuclear Physics: An Introductory Approach by K. Heyde, Third Edition, IOP Publication, 1999.
2. Nuclear Physics by S. N. Ghoshal, First Edition, S. Chand Publication, 2010.
3. Nuclear Physics: Principles and Applications by J. Lilley, Wiley Publication, 2006.
4. Fundamental Physics of Radiology by W. J. Meredith and B. Massey, John Wright and Sons, UK, 1989.
5. An Introduction to Radiation Protection by A. Martin and S. A. Harbison, John Wiley and Sons, Inc., New York, 1981.
6. Schaum's Outline of Modern Physics, McGraw-Hill, 1999.
7. Schaum's Outline of College Physics by E. Hecht, 11th Edition, McGraw Hill, 2009.
8. Modern Physics by K. Sivaprasath and R. Murugesan, S. Chand Publication, 2010.
9. AERB Safety Guide (Guide No. AERB/RF-RS/SG-1): Security of Radioactive Sources in Radiation Facilities, 2011.
10. Radiation Detection and Measurement by G. F. Knoll, 4th Edition, Wiley Publications, 2010.
11. Techniques for Nuclear and Particle Physics Experiments by W. R. Leo, Springer, 1994.
12. Thermoluminescence Dosimetry by A. F. McKinlay, Bristol, Adam Hilger (Medical Physics Handbook 5).
13. Medical Radiation Physics by W. R. Hendee, Year Book Medical Publishers, Inc., London, 1981.
14. Physics and Engineering of Radiation Detection by S. N. Ahmed, Academic Press Elsevier, 2007.
15. IAEA Publications:
 - (a) General Safety Requirements Part 1, No. GSR Part 1 (2010), Part 3 No. GSR Part 3 (Interim) (2010).
 - (b) Safety Standards Series No. RS-G-1.5 (2002), RS-G-1.9 (2005), Safety Series No. 120 (1996).
 - (c) Safety Guide GS-G-2.1 (2007).

Course Title:	Laboratory Operations and Safety Measures	Course Code: 24BSC6306T
Total Lecture hour: 45		
Unit I	Definition, History, and Classification of Cosmetic & Cosmeceutical Products Skin Care Products	Hours
	<ul style="list-style-type: none"> • Basic structure and function of the skin. • Principles of formulation of skincare products. • Role of herbs in skincare: Aloe and Turmeric. • General ingredients and preparation of: (a) Talcum powder (chemical-based and herbal). (b) Face cream/vanishing cream/cold cream/suntan cream/lather shaving cream (any two). (c) Body lotion. 	12
Unit II	Hair Care Products	Hours
	<ul style="list-style-type: none"> • Basic structure of hair and classification of hair. • Principles of formulation of hair care products. • Types of shampoo and conditioners. • Role of herbs in hair care: Henna and Amla. • Role of primary and secondary surfactants in shampoo. • General ingredients and preparation of: (a) Shampoo (chemical-based and herbal). (b) Conditioners. 	12
Unit III	Hand Care and Hygiene Products	Hours
	<ul style="list-style-type: none"> • Principles of formulation of hand sanitizers and hand wash. • General ingredients and preparation of: (a) Hand wash. (b) Hand sanitizer. Nail Preparation <ul style="list-style-type: none"> • Structure of the nail, nail lacquers, nail polish remover. • General ingredients and preparation of: (a) Nail polish and nail polish remover. 	11
Unit IV	Personal Hygiene Products	Hours
	<ul style="list-style-type: none"> • Total fatty matter, alkali content, and pH of soaps. • Bathing soap and toilet soap. • Antiperspirants and deodorants. 	10

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	<ul style="list-style-type: none"> • General ingredients and preparation of: (a) Soaps. (b) Cream soaps. Oral Hygiene Products <ul style="list-style-type: none"> • Common problems associated with teeth and gums. • Role of herbs in oral care: Neem and Clove. • Principles of formulation of oral hygiene products. • Flavours and essential oils. • General ingredients and preparation of: (a) Tooth powder (chemical-based and herbal). (b) Toothpaste. 	
Reference and Reading Books:		
<ol style="list-style-type: none"> 1. Barel, A. O.; Paye, M.; Maibach, H. I. (2014), <i>Handbook of Cosmetic Science and Technology</i>, CRC Press. 2. Garud, A.; Sharma, P. K.; Garud, N. (2012), <i>Textbook of Cosmetics</i>, Pragati Prakashan. 3. Gupta, P. K.; Gupta, S. K. (2011), <i>Pharmaceutics and Cosmetics</i>, Pragati Prakashan. 4. Butler, H. (2000), <i>Poucher's Perfumes, Cosmetic and Soap</i>, Springer. 5. Flick, E. W. (1990), <i>Cosmetic and Toiletry Formulations</i>, Noyes Publications / William Andrew Publishing. 6. <i>Natural Ingredients for Cosmetics</i>; EU Survey, 2005. 7. <i>Formulation Guide for Cosmetics</i>; The Nissin OilliO Group, Ltd. 8. <i>Functional Ingredients & Formulated Products for Cosmetics & Pharmaceuticals</i>; NOF Corporation. 		

Learning Objectives

The learning objectives of this course are as follows:

- To introduce the students to the skill of animation.
- To learn about the application of 2D and 3D animation.

Learning Outcomes

The learning outcomes of this course are as follows:

- After studying this course, students will be able to understand the importance of animation and graphic design.
- After studying this course, students will be able to learn graphic design in 2D and 3D animation.
- After studying this course, students will be able to learn the application of graphic design in 2D and 3D animation in advertising and other areas.

Course Title:	Graphics Design & 2D Animation	Course Code: 24BSC6307T
Total Lecture hour: 45		
Unit I	2D Animation	Hours
	Unit I: Introduction to 2D Animation - Introduction to 2D Animation, Drawing concepts, Colour theory & basics, Incorporating sound into 2D animation.	12
Unit II	Layout & Designing - Basics of sketching, still life, and assignment of basic drawing, Composition of basic elements, Work in different media such as drawing, collage, and painting, Explore the relationship between elements and principles, Pixel and resolution, Vector and Bitmap Graphics.	11
Unit III	Graphics and Advertising (Demonstration) - Creating Digital Layout, Professional image editing (Photoshop), Advertising and relevant case, Graphics and illustration (CorelDraw, Paint), Vector Composition, 2D animation (Macromedia Flash).	12
Unit IV	Broadcast Design (Demonstration) - Working with visual images, Storyboarding, Titles and Credit Making, Stop-motion animation. Production/Post-Production (Demonstration) - Paint & animate (scanning, tracing, ink & paint), Understanding background composition, Basic understanding of 2D animation and techniques, Animation with Flash, Portfolio making. 2D Animation Drawing fundamentals using lines, Sketching of cartoon characters, 2D logo designing, Storyboarding of a 30-second film, Portfolio making for an organization.	10

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Reference and Reading Books:

1. The Illusion of Life: Disney Animation, Ollie Johnston and Frank Thomas, Disney Editions.
2. Blender Production Creating Short Animations from Start to Finish, Roland Hess, Routledge.
3. Animating with Blender: Creating Short Animations from Start to Finish, Roland Hess, Focal Press
4. Simplified Drawing for Planning Animation, Wayne Gilbert, Anamie Entertainment Ltd.
5. GettingStartedin3DwithMaya, Adam Watkins, Routledge.
6. Creating Characters with Personality: For Film, TV, Animation, Video Games, and Graphic Novels, Tom Bancroft, Watson-Guption
7. Force: Dynamic Life Drawing for Animators, Mike Mattesi, Focal Press

Course Objectives:

- To train students in concepts and principles of sustainable ecotourism leading to a new generation of entrepreneurs.
- To inculcate field-based practical skills in translating ecological systems into wealth generation while conserving natural resources.
- To transform local biological wealth into a hub of global attraction and generate a scientific basis of Indian traditional knowledge.

Course Outcomes:

- After studying this course, students will be able to develop next-generation ecological entrepreneurs.
- After studying this course, students will be able to evolve an eco-literate society by integrating market-based instruments with eco-cultural knowledge of traditional societies.
- After studying this course, students will be able to practice ecological knowledge for wealth generation, environmental conservation, and popularization of Indian traditional knowledge.

Course Title:	Ecotourism	Course Code: 24BSC6308T
Total Lecture hour: 45		Hours
Unit I	Assess the current state of ecotourism in little-known/explored areas and examine ecotourism potential. Field survey to identify the existing locations having ecological, wildlife, scenic, and ethnic potential for ecotourism and analyze existing prevalent eco-practices having the potential to integrate with ecotourism programs.	12
Unit II	Identify ten plant species having ecological, economic, and cultural significance as ecotourist attractions. Develop stories on these selected wild habitats to attract ecotourists from within and outside the country. Identify suitable tracks and prepare a checklist of birds and animals with their stories for a diverse group of ecotourists.	12
Unit III	Examine the current state of natural resources and develop suitable messages and appropriate media for educating different target groups. Survey and identify the target group for ecotourism based on their age, education, economic, and other criteria and evaluate their psychological barriers to ecotourism.	11
Unit IV	Develop messages, stories, and pictures to attract tourists and promote ecotourism in the target area. Analyze basic elements of ecotourism, the special needs of ecotourists, develop trips and travel packages offering an array of experiences, and predict the market trends. Develop ecotourist activities for individuals, families, and groups and craft social media campaigns for the proposed ecotourism business.	10
Reference and Reading Books:		

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1. Ballantyne, R., and Packer, J., 2013. *International Handbook on Ecotourism*. Edward Elgar Publishing Limited, UK.
2. Blumstein, D.T., Geffroy, B., Samia, D.S., and Bessa, E., 2017. *Ecotourism's Promise and Peril: A Biological Evaluation*. Springer International Publishing. (Chapters 10-11)
3. Fennell, D.A., 2014. *Ecotourism: An Introduction*. Routledge, London, UK.
4. Fletcher, R., 2014. *Romancing the Wild*. In *Romancing the Wild*. Duke University Press.
5. Tanguay, G.A., and Rajaonson, J., 2015. *Evaluating Sustainable Tourism Using Indicators: Problems and Solutions*. In: Brophy, S.C., (Ed.), *Ecotourism: Practices, Benefits and Environmental Impacts*. Nova Science Publishers, pp. 119-134.
6. Wearing, S., and Schweinsberg, S., 2019. *Ecotourism: Transitioning to the 22nd Century*. Routledge.

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