1.1.3 TEACHERS' PARTICIPATION IN ACADEMIC BODIES AND IN ACTVITIES RELATED TO CURRICULUM DEVELOPMENT AND ASSESSMENT OF THE AFFILIATING UNIVERSITY

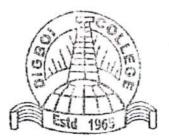


CONTENT:

DOCUMENTS RELATED TO DESIGN AND DEVELOPMENT OF CURRICULUM/SYLLABUS OF ADD-ON/CERTIFICATE PROGRAMMES

Phone: (03751):







P. O. DIGBOI - 786171 (ASSAM) NAAC ACCREDITATION - (B+)

Dig/Col/UGC/(13)/2009/06

Bath 1.2009.

From: -Sri M. Bharali Boruah, M. Sc., Principal i/c & Secretary, Digboi College, Digboi.

To :-The Under Secretary, (R.O.), University Grants Commission, Bahadur Shah Zafar Marg, New Delhi - 110002.

(Through The Director, College Development Council, Dibrugarh University, Dibrugarh)

Ref: -NERO letter No F.1-29/HRE/Policy/2009/NERO/4709-5025 dtd, 26.10.2009.

Sub : -Submission of Proposal for "Human Rights Education" during XI Plan Period.

Sir,

Please find herewith the duly filled in proforma in respect of proposal for "Human Rights Education" under XI Plan Period for your kind perusal and judicious consideration.

Kindly acknowledge receipt of the same.

Thanking You,

Yours faithfully.

(Sri M. Bharali Boruah), Principal i/c & Secretary, Digboi College, Digboi.

Protest of 3 Secretary Digital Codege

PROFORMA FOR SUBMISSION OF PROPOSAL FOR INTRODUCTION OF CERIFICATE COURSE IN HUMAN RIGHTS EDUCATION

 Name of the University/College: (In case of a College, name of the University to which it is affiliated)

DIGBOI COLLEGE
DIBRUGARH UNIVERSTIY, ASSAM

2. Address:

ITAVATA

DIGBOI - 786171

DIST. TINSUKIA, ASSAM

TELEPHONE NO. 03751264416

FAX NO. 03751270472

E-MAIL: digboicollege@yahoo.com

Is the University/College included in section 2(f) and 12(B) of the UGC Act?

YES, 2(f)

4. Level of the course to be introduced:

Certificate course in Human Rights Education

Specify the objective and give full
 justification of the proposed course
 (please attach brief proposal
 separately):

SEPARATE SHEET IS ATTACHED HEREWITH

Name of the department, which proposed to conduct the course DEPARTMENT OF POLITICAL SCIENCE

Name of the nodal person to be the Coordinator of this course with SRI ARUN CHANDRA DUTTA, MA, M.Phil. Head of the Department of Pol. Science

Profile of Sri Arun Chandra Dutta:

Co-ordinatior, National Seminar organizing Committee.

Topic of the Seminar – "Decentralization of Power and Rural Development in India – with Special Reference to North East India" held on 10-11 November 2008.

Editor: Seminar Volume in book form

Editor: Seminar Volume in book form

Publication: a) Published a research paper entitled
"A Critical Evaluation of the Rural Development

Programmes" in the seminar volume in book form.
b) Published three numbers articles in different

magazines and journals.

8. No. of departments to be associated in this programme 4 (four) - Education, Pol. Science, Economics and Philosophy 9. Faculty strength (Cadre- wise) that Mr. B. Das, MA, M.Phil would be associated with the Mr. J. Bora, MA, SLET qualified, presented two numbers of research paper in National Seminar 3. Mr. Jitu Bora, MA, NET and SLET qualified programme: Publication: Research article in the book volume of the National Seminar on "Decentralization of Power and Rural Development in India – with Special Reference to North East India" held on 10-11 November 2008. Paper Presentation: five numbers of research papers in the National/State Level Seminars. 4. Mr Poban Gogoi, MA, NET and SLET qualified Publication: a) Two numbers Research paper in the National level journals in 2007 and 2009. b) Books: "Educational Management" for TDC Major students of the department of Education. Paper Presentation: seven numbers of research papers in the National/State Level Seminars. 5. Mr. M. M. Gogoi, MA, SLET qualified Publication: Research papers in the book volume of the National Seminar on "Decentralization of Power and Rural Development in India – with Special Reference to North East India" held on 10-11 November 2008. Paper Presentation: three numbers of research papers in the National/State Level Seminars. 10. Present students intake in the 150 associated departments: 11. Expected students intake for the 75 proposed course: 12. Infrastructure available for the 100 students capacity class room with IT enabled successful completion of the course:

facilities

Library with 30,000 number of books with

documentation facilities

13. Library/ documentation facilities

available:

- 14. Any other information in support of the proposal:
- * Dibrugarh University, Assam has introduced a paper entitled "Human Rights" for the Three year Degree course final year Political Science major students.
- * The Political Science Department organized Human Rights Awareness programmes in the vicinity of Digboi College in the year 2008.

15. Area of research the department would like to take up:

16. Please indicate if you intend to avail the facility of developing advocacy skills: DOES NOT ARISE

DOES NOT ARISE

Signature of the Head of Department of College/ University (with seal) HOD POLITICAL SCIENCE Digbol College, Digbol

Signature of the Principal of the college (with seal)

Principal VC & Secretary Digboi College

Signature of the Director, College Development Council of the University (with seal)

ANNEXURE-A

Objectives and justification of the proposed course:

Objectives:

- Human Rights awareness among the common people is essential especially in this type of Eastern most part of India.
- Creating defensive attitude among the people against frequent occurrence of violence including terrorism and injustice.
- 3. Maintenance of violence free society including domestic violence.
- HRE will be useful to motivate the young generation morally and intellectually in order to create peaceful atmosphere in the country with special reference to the NE region.

Justification:

Human Rights education is not something like consideration of abstract ideas reflecting certain generous thoughts. Such education is naturally to be adapted to the specific needs of every human being by providing him/her with norms, values, and criteria to which he/she can refer to in the course of daily life. In the age of globalization Human Right education acquire greater importance in the world. One of the greatest challenges of today's time in pluralistic societies like India is the rising conflicts and tensions in the name of particularistic loyalties to caste, religion, one's own region or language. Such a situation is not in accord with the concept of unity in diversity and poses a threat to human rights as well as to principles of democracy and rule of law. It is imperative the people realize the positive social and cultural value of diversity rather than treating it as a source of conflict. The human Rights education must imbibe the understanding tolerance, and respect for different in bringing about situational and social change. Human rights education making an individual aware of his/her rights should at the same time instill respect for the rights of others. Human Right education and teaching should stress that a new international, economic social and cultural order is essential to enable all people to enjoy their human rights and to promote and facilitate education on human rights at all levels in all countries. The roots of HRE are to be found in the living relationship between the teacher and the taught, the prevents and the child and the educator and pupil, when a child is out of the cradle he/she begins to learn to perform his/her duties as a member of the family and then o the community/society. It must be taught at all levels of the educational system as well as in out of school settings.

Most of the people in India especially in NER are far lagging behind the HRE. Such types of course definitely develop the sense of awareness among the people in the easternmost part of NER. To build the national unity and brotherhood and to develop the mutual understanding among the people such type of course will be more meaningful.

English Secretary
L. J. J. JULIEGE



UNIVERSITY GRANTS COMMISSION 35, FEROZSHAH ROAD NEW DELHI – 110001

CAREER ORIENTEDCOURSES (COC) IN COLLEGE

1. Particulars of the Institution:

1.1 Name of the College with postal address: **DIGBOI COLLEGE, DIGBOI**

Dist.:TINSUKIA State: ASSAM Pincode: 786171

1.2 Year of Establishment of the College: 1965

1.3 Name and address of affiliating University: DIBRUGARH UNIVERSITY

1.4 District :DIBRUGARH State: ASSAM

Pincode: 786 004

1.5 Name of the Principal: **DR. DIP SAIKIA**

Tel/Fax No.: 03751-264416

2. Is the College eligible to receive UGC's assistance under Section 2 (f) and 12(B) of the UGC Act, 1956?

Yes

3. COC proposed to be introduced:

Disciplines	Subject	Coordinating Department
Science	Diploma course in	Zoology, Botany & Geography
	WILDLIFE CONSERVATION	
	BIOLOGY	

4. Core (Permanent) Faculty for teaching the COC:

Career oriented specialization courses	Name and designation	Qualification	Subjects
Diploma course in	Mrs. Anu Borgohain	M.Sc.	
WILDLIFE	Mr. Saibal Dev	M.Sc.	7 oology
CONSERVATION	Mrs. Aparajita Gogoi,	M.Sc., PGDEM.	Zoology
BIOLOGY	Mr. R. R. Tariang	M.Sc.	
	Mrs. Sangita Saikia	M.A., M.Phil.	Geography
	Dr. T. Ch. Dutta	M.Sc., Ph.D	Botany

5. Details of proposed COC



DIPLOMA IN WILDLIFE CONSERVATION (DWC)

Duration:: Two semesters (1 year)

Eligibility: Student perusing B.Sc. 1st semester can take this course

Programme overview

Wildlife conservation is the practice of protecting endangered plants and animal species and their habitat. Among the goals of wildlife conservation are to ensure that nature will be around for future generations to enjoy and to recognize the importance of wildlife and wilderness lands to humans. Wildlife conservation has become an increasingly important practice due to the negative effects of human activity on wildlife. The science of conservation biology plays a part in wildlife conservation. The ethic of conservation, in addition to lobbying by conservationists, has made it an important environmental issue.

Biodiversity is the different variety of living beings within an ecosystem or in our planet. It is a measurement on the health of ecosystems. Biodiversity also take part in the function of climate. In terrestrial habitats, tropical areas are rich in species whereas polar areas support lesser species. The conservation of biodiversity is inevitable for the survival of men.

Wildlife conservation is the preservation, protection, and restoration of the endangered species. Wildlife represents all the wild animals and birds living in their natural habitats. We have many rare animals, birds on earth. Wildlife conservation is the preservation, protection, and restoration of the However, the pressure of increasing population has led to the extinction of wildlife.

As there is a high degree of deforestation, efforts are being made by some wildlife conservationists to protect the endangered species of wildlife and those who are on verge of extinction. Conservation of wildlife is important for these reasons:

Natural beauty: Because of their unique features, wildlife increases the natural beauty of the earth.

Economic value: As it supplies many valuable substances, its economic value is important.

Scientific value: Scientists have gathered valuable knowledge about various plants and animals. They discovered important medical products by studying wildlife.

Survival value: Wildlife helps to keep the balanced living systems, which ensure survival of life.

Objectives:



The objective of the course is to produce Wildlife Conservationist who can do conservational activities like awareness campaigns, wildlife research, new discoveries, etc, by procuring many wildlife projects [from state govt., central govt., or even foreign funds] as a result, he/she can sustain themselves as well as at the same time wildlife species are saved by their conservational activities.

Wildlife Conservation Biology Course Suitability

- Those who want to have further research studies are suitable for it.
- Those who want to have further research studies are suitable for it.
- They should have the ability to understand the nature, feature and other activities.
- They should be up to date with the occurring in the wildlife world.
- They should have good communication and interpersonal skills which are necessary for the course.

How is the Wildlife Conservation Biology Course Beneficial?

- The individuals are free to join as ecologists, environmentalists, entomologists, foresters or dendrologists, herpetologist, ornithologist, primatologist, Mammalogist, and a lot more in this series.
- They can also go for the fields of silviculture or as forest range officers or as zoo curators.
- The individuals can also go for education sector for further research work.
- An individual can also become an ethologist with this degree

Wildlife Conservation Biology Course Job Types

- Self sustaining economically by pursuing an important wildlife project
- Wildlife Inspector
- Guest Relations Executive
- Veterinary Consultant
- Environment Impact Assessment Consultant
- Teacher & Lecturer
- Tourist guide [Ornithologist, Lepidopterologist, Mammalogist, Herpetologist, Ecologist



6. Details syllabus of proposed COC approved by Dibrugarh University

Proposed Course Structure:

•	Theory:	credit 20
•	Practical:	credit 10
•	Project Work (Dissertation):	credit 10
	Total	credit 40



Theory: (credit 20)

Unit –1: Concepts pertaining to ecosystem, species, community, biome and ecotone; Wildlife ecology, biodiversity and conservation.

Unit-2: multidimensional niche concept; predation and predator – prey system; Principles of Wildlife Health and Population Ecology.

Unit –3: Renewable and non-renewable resources of N.E. India and strategy for their sustainable utilization. Wetland Conservation and Development

Unit –4:Environmental pollution (water, air and soil); bio-indicators in pollution studies; ecological succession; ecological backlash; greenhouse effect; ozone layer depletion and its impact.

Unit –5: Important endangered species of N.E. India – and biology of the Indian endangered species like Great Indian Rhinoceros, Chinese Pangolin, Golden Langur, Dancing Deer, River Dolphin, Pigmy Hog, Royal Bengal Tiger, Asiatic Elephant and White Winged Wood Duck.

Unit –6:Threats to biodiversity; *ex-situ* and *insitu* conservation strategies; major sanctuaries and national parks of India; concept of biosphere reserve and biodiversity hot spot; Red Data Book, Wild life and Biodiversity Acts in India.

Unit–7: Introduction to animal behavior; patterns of behavior; genetical and ecological aspects of behavior; Different types of orientation and communication in animals. Comparative aspects of learning, offensive and defensive behaviour; social behaviour in insects.

Unit–8: Management of Wildlife Protected Areas, Conservation breeding and Reproduction in wild animals; Wildlife Conservation and Management Practices Tour, Techniques in modern Wildlife Census

Unit –9: Wildlife Conservation and Management Practices Tour; Nutrition of Captive and Free Ranging Wild Fauna.

Unit –10: Wildlife Ecotourism; Specialized Wildlife Techniques Tour; Capture and handling of wild animals.

Unit-11:Research Methodology; Project Writing Skills; Computer Orientation; Biological Statistics; Seminar Presentation Skills.

Unit -12: Basics in Computer Application; Biodiversity analysis software application; Environmental Impact Assessment (EIA) software application

PRACTICAL:(credit 10)

- **1.** Estimation of the size of the population by capture-recapture method (any vertebrate/invertebrate).
- **2.** Find out the abundance and density of insect pests in some essential food commodities.
- 3. Determination of dissolved Oxygen/CO₂/Alkalinity in the water samples.
- **4.** Find out the abundance and densities of terrestrial invertebrates/macrophytes associated fauna by Quadrate method.
- **5.** Identification of producer and consumer of an ecosystem and probable food chain and food web.
- **6.** Scope and utility of statistics in Bioscience; Sampling, collection and graphical representation of data; Measures of statistical average; mean deviation and standard deviation; Probability tests; Correlation and regression; Significance tests (t, F and X^2 tests).
- 7. Analysis of biodiversity sampling, environmental impact analysis software, GIS software.
- **8.** Analysis of water/soil quality and co-relating with the studied wildlife.
- **9.** Vegetation/Animal population sampling through various instruments like inclinometer, densitometer, GPS, GIS, Canopy study, Camera traps, etc.

Project Work (Dissertation): (credit 10)

Topic of the wildlife project may be given in the second month of the date commencement of the course and the report based on proper methodology and statistically correlated data should be submitted for evaluation at the time of practical examination.

7. Guest/Internal faculty:

- 1. Mrs. Anu Borgohain, HOD, Department of Zoology, Digboi College
- 2. Mr. Saibal Dev, Associate Prof. Department of Zoology, Digboi College
- 3. Mrs. Aparajita Gogoi, Associate Prof. Department of Zoology, Digboi College;
- 4. Dr. Bibhab Kumar Taklukdar, Wildlife Biologist, Aaaranyak, Guwahati, Assam.
- 5. Dr. Bibhuti Prasad Lahkar, Wildlife Biologist, Aaaranyak, Guwahati, Assam.
- 6. Dr. Firoz Amend, Wildlife Biologist, Aaaranyak, Guwahati, Assam.
- 7. Dr. Abhijit Das Wildlife Biologist, Aaaranyak, Guwahati, Assam.

8. Coordinator profile of the 'Diploma in Wildlife Conservation Course':

Rajib Rudra Tariang, Assistant Professor & Wildlife Biologist, Department of Zoology, Digboi College; He is M.Sc.in Zoology& Perusing Ph. D. on "A Study on Butterfly Diversity in Jokai Reserve Forest, Dibrugarh District, Assam". He is expertise in:

- Animal census operation (Tiger, Elephant, Primate & Birds)
- Undergone handling of snake for studying their nature and identification.
- Detailed experiences & experts in insect culture in Laboratory condition
- Expertise in organizing nature camps, nature trails, and wildlife awareness programme to different target groups.

Further he worked as Elephant Conservation Officer for 13 months in the project entitled "Environmental education to Minimize The Human- Elephant Conflict to different target groups at Sonitpur & Darrang Dist. Of Assam" sponsored by Aaranyak, A Society for Bio-diversity Conservation In NE. India, Guwahati, and United Fish & Wildlife Services.

He also worked as Field Officer of Wildlife Trust of India, New Delhi for 3 months in the project entitled"Rescue operation of the Greater Adjutant Stork (Leptiptilus dubius) at Kamrup, Sibsagarh & Nagaon Dist. of Assam"

9. Financial Assistance required for Proposed COC (Diploma in Wildlife Conservation):

Item	Estimated Expenditure
Books and Journals	Rs. 100000.00
Equipment(Details of which given below)	Rs. 610000.00
Contingency	Rs. 40000.00
Payment of remuneration to the Guest/Internal faculty	Rs. 250000.00
Total	Rs. 100000.00

<u>Detail of Equipments & its estimated budget to introduce and run 'Diploma in Wildlife</u> Biology Conservation Course': (The estimates are based on current market price from the companies' website)

Sl.	ITEMS	QUANTITY	PRICE PER UNIT	TOTAL		
No.			(in RS)	(in RS)		
1.	Canon EOS 1100 D with 18-55mm;	1 Nos.	26,990+	225110		
	70-200mm, 50mm kit lens		1,69,995+28,125			
2.	Canon430EX II Flash	2 Nos.	16486	16486		
3.	Vanguard Espod Plus 203AB tripod	2 Nos.	5931	5931		
4.	CowboystudioPhotostudio 480 watt 3	1 No.	36690	36690		
	moonlight flash lighting kit					
5.	Tokina AT-x116 pro DX Af 11-	2 Nos.	44500	44500		
	16mm f2.8 for canon					
6.	Laptop Dell XPS 15	1 No.	67,181	67181		
7.	Insect collecting equipments	1 Set	10,000	10000		
8.	Insect cabinet	1 set	20,000	20000		
9.	Binocular 85 x 20 mm	1 No.	10,000	10000		
10.	GPS Etrex Vista HCx	1 No.	35,000	35000		
11.	Inclinometer	1 Nos.	5,000	5000		
12	Densitometer	1 Nos.	7,000	7000		
13.	Field Dress	10 sets	10,000	10000		
14.	Water Testing Kit	2 Sets	20,000	40000		
15.	Soil Testing Kit	2 Sets	20,000	4 000		
16.	Measuring Tape	5 Nos.	1,000	5000		
17.	Stationery items			70000		
Tota	Total (RupeesSix lakhs seven thousand eight hundred ninety eight only.) 607898					









Dr. Rupam Saikia, , M. A., LLB., Ph.D. Director College Development Council,

DIBRUGARH UNIVERSITY DIBRUGARH – 786 004 ASSAM, INDIA

Phone: 0373-2370562(O),

Fax - 0373 - 2370768 & 2370323

Date: 24/9/17

No. DU/DCDC/12/UGC/Proposal-COC/BC/4140~42

To

Dr. K. C. Pathak, Joint Secretary, Career Oriented Course, University Grants Commission, 35 Ferozshah Road, New Delhi – 110 001.

Sub: Proposal for Career Oriented Course.

Madam,

This is with reference to the letter received from the Principal, Digboi College, P.O. Digboi, Dist. Tinsukia (Assam) regarding submission of proposal for financial assistance for introduction of Career Oriented (Certificate / Diploma) Course(s) in Wildlife Conservation Biology under the provision of University Grants Commission.

I am forwarding the proposal for your kind consideration.

Yours faithfully

(D. Coilsia)

Copy to:

1. The Principal, Digboi College, P.O. Digboi, Dist. Tinsukia (Assam).

College Development Council Dibrugarh University

2. Office file.

(R. Saikia)

CERTIFICATE

It is certified that the information given above is correct and that we have gone through the details of the UGC Scheme of Career Oriented Courses of First Degree Education, i.e. guidelines, criteria, eligibility conditions, syllabus of subjects proposed to be introduced, procedures to be followed including monitoring and evaluation etc. circulated by the UGC on the subject and undertake to abide by the same to implement the scheme within the prescribed time frame, if approved by the UGC.

(Dr. Rupam Saikia)

Director, College Development Council Dibrugarh University, Dibrugarh-786004

Seal and Signature **College Development Council** of the university Director

College Development Council Dibrugarh University

Dighoi College, Dighol (Dr. Dip Saikia) Principal, Digboi College, Digboi-786171

Seal and Signature **Principal of College**





Details syllabus of proposed COC Wildlife Conservation Biology approved by Dibrugarh University

• Theory : credit 20 • Practical: credit 10 • Project Work (Dissertation): credit 10 Total credit 40

Theory: (credit 20)

- **Unit -1: Concepts** pertaining to ecosystem, species, community, biome; Wildlife ecology, biodiversity and conservation, landscape ecology.
- **Unit-2: Population Ecology**: abundance and density, geometric population growth, exponential population growth, density dependent and independent models (Logistic growth).
- **Unit –3: Community Ecology:** Concept of diversity, factors affecting species richness, niche concept, Competition and co-existence, food web, prey and predator relationship, Ecological succession and plant and animal interaction, concept of biogeography.
- **Unit -4:** Renewable and non-renewable resources of northeast India and strategies for their sustainable Utilisation, tropical forests and their conservation; wetland conservation and development; freshwater ecosystem.
- **Unit -5: Environmental Pollution (water, air and soil)**; bio-indicators in pollution studies; ecological backlash; greenhouse effect; ozone layer depletion and its impact, climate change and its impact on biodiversity.
- **Unit -6: Ecology and Conservation Important.** Endangered species of north-eastern India –Great Indian Rhinoceros, Chinese Pangolin, Golden Langur, Dancing Deer, River Dolphin, Pygmy Hog, Hoolock Gibbon, Royal Bengal Tiger, Asiatic Elephant, White Winged Duck, Vultures and Hornbills.
- **Unit –7:** Wildlife Management; *ex-situ* and *in-situ* conservation strategies; major sanctuaries and national parks of India; concept of biosphere reserve and biodiversity hot spot; Red Data Book, Wild life and Biodiversity laws in India, wildlife ecotourism, joint forest management.
- **Unit-8: Conservation Biology**: Deforestation, habitat loss and fragmentation, extinction, human-wildlife conflict, hunting, ecological restoration and reintroduction of species, impact of big dams on the biodiversity of north-eastern India, shifting cultivation, conservation genetics, invasion ecology.
- **Unit-9:** : **Introduction to Animal Behavior**: Evolutionary approach to animal behaviour: proximate and ultimate questions, behavioural variations: spatial and temporal; intra- and inter-individual; individual and population, mechanisms of behavioural variations: developmental, neural, hormonal, and ecological, evolution of mating systems, evolution of parental care, adaptation and plasticity, evolution of animal signals and communications, cooperation and social behaviour in insects, primates and elephants.
- **Unit -10: Human ecology**: Human influence on natural resources, natural resource management, community initiatives (e.g., sacred groves, community-managed forests), sustainable resource use.
- **Unit-11: Research Methodology**; Project Writing Skills; Computer Orientation; Biological Statistics; Basics of presentation skills.
- Unit -12: Basics in Computer Application; Introduction to biodiversity analysis software application.

PRACTICAL:(Credit 10)

- 1. Estimation of the size of the population by capture-recapture method (any vertebrate/invertebrate).
- 2. Find out the abundance and density of insect pests in some essential food commodities.
- 3. Determination of dissolved Oxygen/CO2 /Alkalinity in the water samples.
- 4. Find out the abundance and densities of terrestrial invertebrates/macrophytes associated fauna by Quadrate method.
- 5. Identification of producer and consumer of an ecosystem and probable food chain and food web.
- 6. Scope and utility of statistics in Bioscience; Sampling, collection and graphical representation of data; Measures of statistical average; mean deviation and standard deviation; Probability tests; Correlation and regression; Significance tests (t, F and X2 tests).
- 7. Analysis of biodiversity sampling, environmental impact analysis software, GIS software.
- 8. Analysis of water/soil quality and co-relating with the studied wildlife.
- 9. Vegetation/Animal population sampling through various instruments like inclinometer, densitometer, GPS, GIS, Canopy study, Camera traps, etc.
- 10. Project Work (Dissertation):(credit 10)

Topic of the wildlife project may be given in the second month of the date commencement of the course and the report based on proper methodology and statistically correlated data should be submitted for evaluation at the time of practical examination.

DESIGN AND DEVELOPMENT OF

B.VOC PROGRAMME IN SMALL TEA GARDEN MANAGEMENT



ডিগবৈ মহাবিদ্যালয় DIGBOI COLLEGE

Recommendation

DESIGNED AND DEVELOPED BY

RAJIB RUDRA TARIANG

ASSISTANT PROFESSOR

DEPARTMENT OF ZOOLOGY

AREA ORPROVINGEN OF CONTROL OF CONT

DESIGN AND DEVELOPMENT OF

B.VOC PROGRAMME IN TOURISM AND HOSPITALITY MANAGEMENT



ডিগবৈ মহাবিদ্যালয় DIGBOI COLLEGE

Recommendation

DESIGNED AND DEVELOPED BY

Dr. DEBORSHEE GOGOI

ASSISTANT PROFESSOR

DEPARTMENT OF COMMERCE

Objection College, District Goo. 18

Guidelines for Introduction of Bachelor of Vocation (B.Voc.) Programme in Universities and Colleges under the National Skills Qualifications Framework (NSQF)

1. Introduction

It has been a long felt necessity to align higher education with the emerging needs of the economy so as to ensure that the graduates of higher education system have adequate knowledge and skills for employment and entrepreneurship. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner to produce holistic and well groomed graduates.

Govt. of India, in pursuance of the decision of Cabinet Committee on Skill Development in its meeting held on 19th December, 2013 issued a notification for National Skills Qualifications Framework (NSQF). Under the National Skills Development Corporation, many Sector Skill Councils representing respective industries have/are being established. One of the mandates of Sector Skill Councils is to develop Qualification Packs (QPs) / National Occupational Standards (NOSs) for various job roles in their respective sectors. It is important to embed the competencies required for specific job roles in the higher education system for creating employable graduates.

The University Grants Commission (UGC) had launched a scheme on 27 February, 2014 for skills development based higher education as part of college/university education, leading to Bachelor of Vocation (B.Voc.) degree with multiple entry and exit points. Considering the implementation modalities, the guidelines of the scheme have been revised in the year 2015. The B.Voc. programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles and their NOSs along with broad based general education. This would enable the graduates completing B.Voc to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

UGC GUIDELINES FOR B.Voc.

2. Objectives

- 2.1 To provide judicious mix of skills relating to a profession and appropriate content of general education.
- 2.2 To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.
- 2.3 To provide flexibility to students by means of pre-defined entry and multiple exit points.
- 2.4 To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
- 2.5 To provide vertical mobility to students coming out of (a) 10+2 with vocational subjects; and (b)Community Colleges.

3. Eligibility / Target

All universities and colleges included under Sections 2(f) and 12(B) of the UGC Act, 1956 will be considered under the scheme.

- 3.1. The existing universities and colleges recognized by the UGC under section 2(f) and 12(B) of UGC Act, 1956 and eligible to receive General Development Assistance will be supported by UGC for implementing the Scheme of B.Voc degree programme. The eligible universities and colleges may submit the proposal under the Scheme to the UGC in specified format as per Annexure A of the guidelines.
- 3.2. Self financing institutions recognized under 2(f) and 12(B) of the UGC Act 1956, and not eligible to receive General Development Assistance from the UGC may also be considered for approval under the scheme. However, they will abide by the guidelines of UGC as amended from time to time, but will not be entitled for any financial assistance under the scheme.
- 3.3. The Government / Society / Trust or a Company may also set up an independent institution, to implement the scheme and may offer B.Voc course as per the extant guidelines. The financial assistance to such institutions will be governed as per the prevailing policy of the Commission.

for developing the Curriculum of Small Tea Garden Management for B. Voc. Programme.

Level	Process required	Professional knowledge	Professional skill	Core skill	Responsibility
Level 5	Job that requires well developed skill, with clear choice of procedures in familiar context	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools materials and information	Desired mathematical skill, understanding of social, political and some skill of collecting and organizing information, communication	Responsibility for own work and learning and some responsibility for other's works and learning
Level 6	Demands wide range of specialized technical skill, clarity of knowledge and practice in broad range of activity involving standard / non-standard practices	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Reasonably good in mathematical calculation, uniderstanding of social, political and, reasonably good in data collecting organizing information, and logical communication	Responsibility for own work and learning and full responsibility for other's works and learning
Level 7	Requires a command of wide ranging specialized theoretical and practical skill, involving variable routine and non-routine context	Wide ranging, factual and theoretical knowledge in broad contexts within a field of work or study	Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Good logical and mathematical skill understanding of social political and natural environment good in collecting and organizing information, communication and presentation skill	Full responsibility for output of group and development

Professional knowledge is what a learner should know and understand with reference to the subject; Professional skills are what a learner should be able to do and, Core skills refer to basic skills involving dexterity and use of methods, materials, tools and instruments used to perform the job including IT skills needed for that job. Responsibility aspect determines the (i) nature of working relationship, (ii) level of responsibility for self and others, (iii) managing change and (iv)accountability for actions.

COURSE SYLLABUS FOR B.VOC PROGRAMME

IN

SMALL TEA GARDEN MANAGEMENT (STGM)

UNDER DIBRUGARH UNIVERSITY

PREPARED BY



DEPTT. OF B.VOC-SMALL TEA GARDEN MANAGEMENT Digboi College,

Digboi-786171, Assam

Qualifications Pack for Small Tea Garden Management (STGM)

	Qualifications Pack Code		AGR/Q (yet to get the number)	
	Job Role		Executive/Trainee Management of a Tea Estate or Entrepreneur	
ЈОВ	Credit (NSQF)	6	Version Number	Yet to create
DETAILS	Sector		Agriculture	
	Sub-Sector		Small tea garden management/ Plantation Management (STGM)	
	Redraft as per UGC (NSQF) on		01/09/2016	
	Occupation		Executive/Trainee Management of a Tea Estate or Entrepreneur	

Job Role	Executive/Trainee Management of a Tea Estate or Entrepreneur				
Role description	The candidate will acquire details know how the ground level activities involved in right from land preparation, nursery operation, planting methods & use of diff materials (clone & cloned seeds), vegetative propagation, plucking and tipping, prur INM, IPM, processing of different types of tea, sorting, grading, packaging, Organic T development policies of STG from TBI, problems of STG & it's management, different followed in tea plantation, Irrigation & drainage systems, shade tree & it's imp practices, different development policies of TBI, preparation of budget & cost estimates planning, record keepings, how SHG/ Cooperative/ federation can be form within the of vermin-compost unit, tea quality tasting method's, marketing & policy making for warehouse & it's role, process of tea auction, Health & safety in work place, Statute followed in plantation industry, Internship in a commercial garden to know the different adopted in a tea estate & what is the role of the management people's from the management people's fr	erent planting aning & Skiffing, ea Cultivation, field practices fortance, HRM ation, business e STG's, set up marketing tea, bry compliance ferent systems			
NSQF level	of view.				
Min. Educational	10+2 passed				
Qualifications	Graduate & above				
Max Educational	Graduate & above				
Qualifications					
Training (mandatory)	OJT & Internship for a minimum 2 months in a commercial tea estate				
Minimum Job Entry Age	21 years				
Experience	Fresh Graduate/Post Graduate or experience in plantation field (not mandatory)			
Applicable National	Compulsory:-	,			
Occupational Standards	SEM. PAPER NOS. TOPICS				
(NOS)	1ST. 1a AGR/N/S1.1- Introduction to Tea with reference to STG				
(1403)	1b AGR/N/S1.2 - Agro practices of Tea plantation				
	1c AGR/N/S1.3 - Plantation Management				
	2ND. 2a AGR/N/S 2.1- Soil Nutrient Management				
	2b AGR/N/S2.2- Plant Protection (Integrated disease, pest & weed management)				
	2c AGR/N/S2.3- Application Techniques & Management of Sprayers at Sprayer Parts	nd			
	3RD 3a AGR/N/S3.1- Tea Processing in details				
	3b AGR/N/S3.2- Management of Made Tea				
	3c AGR/N/S3.3- Statutory Compliance in Tea Management				
	4TH 4a AGR/N/S4.1- Budget & Estimation and Business planning				
	4b AGR/N/S4.2- TBI Development Scheme on Tea plantation				
	4c AGR/N/S4.3- Estate Management				
	5TH 5a AGR/N/S5.1- Organic Tea and Specialty Tea Management				
	5b AGR/N/S5.2- Management of Farmer Producing Company &				
	Management of Green Leaves				
	5c AGR/N/S 5.3- Major Thrust Area of Small Tea Garden				
	6TH 6a AGR/N/S6.1- Exercise on operations followed in Tea Estate				
	6b AGR/N/S6.2- Skill up with cultivation practices				
	6c AGR/N/S6.3- Skill up with Management & processing practices				
	(N/S6.2 &N/S 6.3 will be done during internship in commercial tea estate)				
Doufournous Cuitania	Optional: NA				
Performance Criteria	As described in the relevant OS units				

Paper: S 1. 1: Introduction to Tea with reference to STG (6 Credits)

Overview & key learning as per NOS:

This paper unit component of first semester will help the student to know in details about the introduction of Tea in India and also worldwide emergence of tea, especially invention history of tea in Assam, other North East & Eastern States & also the emergence of the Small Tea Grower (STG) in Assam & other parts of India. It will also help the student's to know the "Role of tea in Indian Economy".

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

History of Tea Cultivation

1 Credit (10 marks)

Origin of Tea, History of Tea cultivation in India & Assam, History & introduction of STG in Assam, Total area of STG posses as on date in respect to total area of Assam in terms of land, production quantity from beginning to present.

UNIT-II

Importance & Science in Tea

1 Credit (10 marks)

Tea as a beverage of all people, Tea & employment generation, Tea in Indian Economy, Taxonomy of Tea, Tea in human health, Chemical constituent of Tea plant.

UNIT- III

Planting materials in Tea

1 Credit (10 marks)

Planting materials release by Tocklai Tea Research Institute and Planting materials approved by Tea Board of India.

UNIT-IV

Propagation of Tea and Nursery Techniques

1 Credit (10 marks)

Propagation by seeds, Vegetative propagations, Grafting, Mother bush Management, Establishment of Tea seed orchards, Method of collections & preservation of seeds, Nursery management (Package & practices followed in nursery)

Practical 20 marks

Field Works to understand about different practices followed in nearby Tea Estates.

Internal Assessment 15 marks

Submission of assignment on given subjects

Paper: S 1.2: Agro Practices of Tea Plantation (6 Credits)

Overview & key learning as per NOS:

After going through the units of this skill paper, the students will be able to learn different types of planting materials like different clones & bi-clonal seed varieties, able to choose the planting materials by narrating criteria, establishment of clonal nucleus plot, procedure of seed collection & packaging. Further, these unit helps in establishment of tea plant nursery, young tea management practices & also get the information on different developmental schemes under TBI (Five Year Plan) for STG's & commercial garden.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Soil and climate requirement for Tea

1 Credit (10 marks)

Soil structure, Texture and soil health for Tea Plantation, Soil rehabilitations, Soil topography etc; Climatic conditions includes temperature, rainfall, relative humidity required for suitable Tea plantations.

UNIT-II

Establishment of Tea plantations

1 Credit (10 marks)

Selection of planting sites, land preparations, nursery management (package and practices followed in nursery), plant spacing and staking, planting operations both pre and post-planting operations.

UNIT- III

1 Credit (10 marks)

Government policies on Tea Plantation

Different Government policies and support on Tea estate and also for Small Tea Grower (STG).

UNIT-IV

Formalities for opening a Tea plantation for new corners.

1 Credit (10 marks)

Practical 20 marks

Field visit to nearby Tea Estate to know the various operations followed in Tea plantations. Soil sampling, soil pH, soil texture, bulk density and soil moisture. Available NPK and other micro nutrients measured.

Internal Assessment 15 marks

Assignment on selected subjects.

1ST SEMESTER

Paper: S 1.3: Plantation Management (6 Credits)

Overview & key learning as per NOS:

The component units under this paper help the students to know how to pluck leaves from young tea as well as matured tea bushes, able to learn how plucking to be done under various situation, able to determine the plucking standard, caring in green leaves handling, help in understanding the tipping as well as determine the height of tipping for different types of prune & skiff tea bushes, further, the students develop the skill of supervising plucking. Again in regards to pruning & skiffing this paper help in skill up the students how pruning operation is carry out, before pruning what are the criteria to be follow, what are the safety measures one should take before pruning /skiffing of a tea bushes, also it helps in identify recommended height of different types of prune/skiff. This unit also includes drainage system and young Tea management practices in Tea.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Drainage in Tea plantation

1 Credit (10 marks)

Importance of water in growth and development of Tea plants, Importance and management of irrigations and drainage systems practices in Tea.

UNIT- II

Young Tea Management

Methods of bringing up of young tea plants, objectives of formative prunes. Schedule of operations for bringing up of young Tea, Nutrient management in young Tea.

1 Credit (10 marks)

UNIT-III

Pruning & Training

1 Credit (10 marks)

Concept of pruning and skiffing. Why pruning and skiffing is necessary & when the operations followed. Training on different types of Pruning to develop pruning skills, what is the Pruning cycle follows in Garden & what height consider in different types of pruning what is the percentage maintain for pruning & un-pruning & Why? UNIT- IV

Plucking & Tipping 1 Credit (10 marks)

Methods of Plucking & Tipping in Young Tea Plants & Matured tea, Methods of plucking for maintenance of plant canopy, maintenance of Plucking Table of the Tea plants for getting maximum yield as well as Quality, Plucking round management.

Practical 20 Marks

- 1. Pruning & skiffing operation carried out in field.
- 2. Plucking & tipping practices in the garden.
- 3. Preparation of different types of drainage systems.

Internal Assessment 15 Marks

Assessment on the basis of theory.

Paper: S 2.1: Shade Tree and Soil Nutrient Management (6 Credits)

Overview & key learning as per NOS:

After studying these units of 2nd semester, the students will be able to learn maintenance and importance of shade tree, management of infills, nutritional management and their functions, foliar applications and deficiency symptoms of nutrients.

Total Marks: 100 Theory-40+ Practical-40 +Internal Assessments-20

UNIT- I

Shade Tree & Maintenance of Shade tree

1 Credit (10 marks)

Advantage of Shade tree, what are the plants used as Shade tree, spacing of shade tree, treatment of shade tree to become a free from disease & Pest.

UNIT-II

Management of Infills.

1 Credit (10 marks)

Causes & objectives of Infilling. Different situations for Infilling, infilling operations, manuring of infills.

UNIT- III

Soil Nutrients Management in Tea Plantation

1 Credit (10 marks)

Soil Conservation, Role of soil nutrient in the growth & development of tea, study on nutrients deficiency symptoms & its improvement practices for growth & development for tea plantation in terms of maximum production.

UNIT-IV

Minerals Nutrition of Tea

1 Credit (10 marks)

Functions of major and micro nutrient in Tea, Soil fertility and crop productivity, use of lime and iron pyrite why & when needed. Nutrients management in young Tea, nutrient management in matured Tea, foliar applications of nutrients and deficiency symptoms of nutrients.

Practical 40 marks

Field visits and laboratory works

- 1. Visit to nearby Tea Estates to study the shade trees and nutrient deficiency symptoms.
- 2. Calculations of YTD (Young Tea Dose) and manuring policy of matured Tea.

Internal Assessment

Preparation of reports of field visits and submission of herbarium

20 marks

Paper: S 2.2: Plant Protection (6 Credits)

Overview & key learning as per NOS:

After going through this paper component the students will acquire the meaning of IPM (minimum ETL), which ultimately reduced the affect in the ecology, it also help in develop the skill in identification of major pests, diseases and different species of weeds attack on tea bushes along with their control measures by means of using inorganic chemical, organic and biological methods of controls, the students will also able to know about PPA; as well as the TBI recommended chemicals, which have a very low residual effect on made tea & ultimately does not affect in the health of tea consumed peoples of the world.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Pest Management in Tea

1 Credit (10 marks)

Identification, symptoms and control measures by various synthetic chemical, organic chemicals, biological trap, Integrated Pest control measures

UNIT-II

Disease Management

1 Credit (10 marks)

Identification, symptoms and control measures by various synthetic chemical,

organic chemicals, Integrated disease control measures.

UNIT- III

Weed management

1 Credit (10 marks)

Identification, symptoms and control measures by various synthetic chemical, organic chemicals. Methods of collar weeding.

UNIT-IV

Stress Management in Tea

1 Credit (10 marks)

How the drought management overcome, management in water logged condition, rain water harvest method and procedure, climate change and climate resilient in Tea, use of Mulching with a proper thickness, proper use growth regulators, use of lime/pyrite, if soil is too acidic or alkaline.

Practical 20 marks

- 1. Identification of different pest & diseases & their symptoms.
- 2. Identification of different stress symptoms.

Internal Assessment

Assignment on the basis of theory, submission of herbarium on weeds, collection of pests and diseases. 15 marks

Paper: 2.3: Sprayers: Application and maintenance and types of Made Tea (6 Credits)

Overview & key learning as per NOS:

Basically, this paper emphasizes on various spraying tools along with different size of the nozzles used for pests, diseases and weed controls in tea plants as well as in shade trees, the student will develop the skill how to operate various types of spraying machines and which nozzle use for pests/diseases/weeds control practices. Above this it will also help in develop the skills of different characteristics of better performance factors of the nozzle like temperature, rate of discharge, surface tension and also the effective time of spraying for better result of IPM practices. This unit also includes different stages of manufacturing black, green and hand-made tea, Tea tasting and marketing.

Total Marks: 100 Theory- 40 + Practical-40 +Internal Assessments-20

UNIT- I

Sprayer its different types and applications.

1 Credit (10 marks)

What is Sprayer, various types of sprayer used for various purposes, like control of

Pest, Diseases & Weed in tea plantation.

UNIT-II

Calibration & operation, Spraying Techniques

1 Credit (10 marks)

How the calibration & operation practices followed in tea plantation, Different Techniques of application of spraying machine for effective control of Pest, Diseases & Weeds in tea plantation.

UNIT-III

Nozzle & Types of Nozzle, Nozzle performance factors.

1 Credit (10 marks)

What is nozzle, its importance in spraying different pesticides, weedicides application?

Types of nozzle used in different situations for effective results. Factors to be

Types of nozzle used in different situations for effective results. Factors to be considered for nozzle performance like temperature, viscosity, surface tension, nozzle wear etc.

UNIT- IV

Tea Manufacturing and Marketing

CTC/Orthodox/Green Tea/Hand Made Tea; Different stages of manufacturing and 1 Credit (10 marks) marketing.

Practical: 40 marks

Internship of students for one month in various Tea Estates of their own choice. Submission of internship report. Maintenance of daily routine work in a diary during internship period is compulsory.

Internal Assessment: 20 marks

Submission of assignment work on vermi-compost.

3RD SEMESTER

Paper: S 3.1: Tea processing and Tea Tasting (6 Credits)

Overview & key learning as per NOS:

This paper is most important for the students to develop skill in manufacturing process of three different types of Made Tea- Black Tea (CTC & Orthodox): Green Tea and Olong Tea. This chapter will help in determining the students which type of leaves used for best quality tea making of above mentioned made tea. The student also able to know in details the processes involve in making a made tea from the harvested green leaves, role of each and every machineries used in processing like withed ring troughs, rolling table, CTC machine with shape of roller, fermenting, dryer, sievers of different sizes used for different grades, sorting, packaging and how the tea is tasted to know the quality of Made Tea.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Manufacturing of Tea: I

1 Credit (10 marks)

Details technique of processing made tea from the harvest of tea leaves. Role of withering trough, rolling machines, fermenting, CTC & orthodox machineries, different Dryer, Roaster etc..

UNIT-II

Manufacturing of Tea-II: Drying, Sorting, Grading, Packaging & Weighing

1 Credit (10 marks)

What is Dryer, Types of Dryer, how different grade of CTC & orthodox tea are made under recommended temperature, what is Sorting, what are the percentage of sieve used in the sorting Machine to get different size of CTC & Orthodox tea, How the Grading is done, what are the names of different grade of CTC & Orthodox Tea, like BP, BOP etc.

UNIT- III

UNIT-IV

GREEN TEA MANUFACTURING

1Credit (10 marks)

How green tea is made? what types of tea leaves are suitable for making green tea, how the boiling temperature maintain in Roaster for making Green Tea, steps followed in making green tea till packaging, why green tea are preferred in terms of beverage for drinking & and as a medicinal value.

Tea Quality & Tea Tasting

1 Credit (10 marks)

Why Tea Tasting is important? How the different types of tea testing done in a factory? What are the criteria of a good Tea Tester?

Practical 20 marks

Visit to a Tea factory.

Internal Assessment 15 marks

Assignment on the subjects studied in the semester (flowchart- Black Tea).

3RD SEMESTER

Paper: S 3.2: Management of Made Tea (6 Credits)

Overview & key learning as per NOS:

This paper component emphasis is given on how the quality of Made Tea is made up of and from which type of leaves, what plucking cycle needs to follow to attain different quality of made Tea, handling of Made Tea in order to retain quality, what are the risks involved and how to mitigate the risks in making green Tea, hoe the tea estates plays an important role in generating income to the educated/uneducated employment and unemployed person by employing in this profession.

Total Marks: 100 Theory-40+ Practical-40 +Internal Assessments-20

UNIT- I

Management of different quality of made tea

1 Credit (10 marks)

Importance of making quality made tea, what are the factors like leaves, withering, fermenting, drying, grading, sorting, packaging etc. plays an important role in making different quality made tea.

UNIT-II

Comparative study of Green tea with other made tea

1 Credit (10 marks)

What are the differences of green tea with other's made tea, study of value, demand, production, export comparison between green tea & other's made tea? UNIT-III

Risk involved in making a green tea in Assam condition

1 Credit (10 marks)

What are the risks involved in making green tea from production to processing in Assam Condition, how these problems can be solved in an effective manner? UNIT-IV

Role of Tea Industry & STG in bringing the unemployable youth to main stream

1 Credit (10 marks)

Planning & execution in bringing the youth into commercial business-like STG growers, effects of law & insurgency problems of the State after taking this plan of action.

Practical: Field Visit 40 marks

UNIT- I: Steps followed in making a made tea of CTC & Orthodox Tea with details 20 marks

of machinery used and criteria maintain.

Unit- II: Steps followed in making a Green tea with details of machinery used 10 marks

and criteria maintain.

Unit-III: Different Grade of Made Tea (CTC, Orthodox, Green Tea), sorting, blending 10 marks

& Packaging etc...

Internal Assessment 20 marks

Submission of flowchart diagram of the process of making Green Tea/Handmade Tea.

3RD SEMESTER

Paper: S 3.3: Statutory Compliance in Tea Management (6 Credits)

Overview & key learning as per NOS:

This paper unit's component basically helps in understanding as well as to skill up the students to understand the plantation acts and the rules applicable in plantation industry. In commercial garden all the statutory compliance under plantation act have to adhered as per the norms of TBI, otherwise TBI may cancel the registrations.

Total Marks: 75 Theory-40 + Practical-20 +Internal Assessments-15

UNIT- I

The Plantation Labour Act, 1951

Definition & Objective, Scope & provisions in regards working hours, Leave with wages, Procedure for Penalties, employer obligation.

UNIT- II

The Factory Act, 1948

Definition & Objective, Registration Procedure & criteria for obtaining Factory License, Renewal of License, and Safety measure to be taken for Factory workers.

1 Credit (10 marks)

UNIT-III

The Payment of wages Act, 1936

Definition & Objective, Fixation of wages

The Payment of Bonus Act, 1936

Definition & Objective, who are eligible for bonus payment, on what basis bonus is paid, whom & why the bonus is given as a minimum bonus & deduction of bonus payment. How the bonus paid either one phase or two phase

1 Credit (10 marks)

UNIT-IV

The Employee PF Act, 1952

Definition & Objective, who are eligible for PF payment

The Industrial Employment Act, 1946

Definition, Objective & Major component of the act.

The Minimum wages Act, 1948

Definition & Objective, Wages of Permanent & Temporary workers, Wages for Skilled, Semi-skilled & Unskilled workers as per Governments norms.

The workmen Compensation Act, 1923

Definition & Objective, who & why eligible for compensation

Practical 20 marks

Field visit to a Tea Estate where all the statutory are maintained and how?

Internal Assessment: 15 marks

Assignment on the subject studied in the semester.

Paper: S 4.1: Budget planning & Estimation and Business planning (6 Credits)

Overview & key learning as per NOS:

After going through this paper, the students will be able to develop the skill on making a budget planning & estimation for the every financial year of a tea estate, which will help to know the allocation of funds under different heads and on this basis one can prepare a business plan accordingly.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Preparation of Budget and Estimation

1 Credit (10 marks)

Preparation of plan of action under different head of a Tea Estate, how budget & estimation is made up & its importance in management & execution to run a tea estate smoothly.

UNIT-II

Business Planning

1 Credit (10 marks)

On the basis of budget cost, the business planning is done; Consider the factors for earning through other source, Profit & loss reflection. How a maximum utilization man day can be made to cut down the cost.

UNIT- III

Record Keeping in Tea Estate

1 Credit (10 marks)

Records need to keep given in Annexure-1

Use of computer in Tea Industry.

UNIT-IV

Marketing of Tea & Warehouse Management

1 Credit (10 marks)

Role of Tea Auction Centre of Assam in Marketing, What is the role of Broker's in Tea Marketing, Private marketing of Tea, what is ware house & its importance in tea industry.

Practical

- 1. Field visit to a Tea Estate where all the statutory maintained and how? 20 marks
- 2. Visit to a Tea Auction Centre and Warehouse.

Internal Assessment 15 marks

Assignment on the subject studied in the semester.

Paper: S 4.2: Tea Board Development & Plantation Scheme on Tea (6 Credits)

Overview & key learning as per NOS:

In this units all the development & plantation schemes (under five year plan) will be elaborately discuss, so that the students after passing out with a various skill's & join in a job or become an entrepreneur, they will be able to materialized the schemes and able to make the required information to get qualify & avail the benefits from the schemes. The same condition is though applicable for STGs but there are various grants in aid schemes for the STG's, which are also discuss in details in this paper, so that the STG's also able to get the grant from TBI.

Total Marks: 75 Theory-40 + Practical-20 +Internal Assessments-15

UNIT- I

Details on Plantation Development Scheme

1 Credit (10 marks)

Study on the various component under plantation development Scheme in details. Study on the sub component of plantation development scheme in details, the eligibility criteria & the rate of subsidy on different component & the disbursement system.

UNIT-II

Details on Plantation Development Scheme

1 Credit (10 marks)

Study on the various component under plantation development Scheme in details. Study on the sub component of plantation development scheme in details, the eligibility criteria & the rate of subsidy on different component & the disbursement system. UNIT-III

Details on Human Resource Management Scheme

1 Credit (10 marks)

Details Study on the sub component on the HRM schemes, the eligibility criteria & the rate of subsidy on different component & the disbursement system.

UNIT- IV

Detailed study on market promotion and Research & development scheme.

1 Credit (10 marks)

Detailed study on the sub-component on the above schemes, the eligibility criteria and the rate of subsidy of different component and the disbursement system

Practical: 20 marks

Exercise on the feeling up of applications for different developmental schemes to fulfill the eligibility for getting subsidy/incentives/grant in aid.

Internal Assessment: 20 marks

Assignment on the subjects studied in the semester.

Paper: S 4.3: Estate Management (6 Credits)

Overview & key learning as per NOS:

After going through this paper unit's, the students will be able to develop the knowledge & skill on Garden management, which includes how /when extension planting, replanting planting, similarly factory management works & any others administrative functions of the estate are to be done/ maintain to run the estate smoothly and organize manner.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Garden Management

1 Credit (10 marks)

Study on Extension, Replanting, Rejuvenation planting & new planting followed in a garden.

UNIT-II

Factory Management

1Credit (10 marks)

Repairing & maintenance of the factory equipment's, extension of factory buildings & replacement of old parts with new parts & up gradation of machineries. The functions of store in Tea plantations and its management required for the smooth running of a Tea Estate.

UNIT- III

Human Resource Management in Tea

1 Credit (10 marks)

Organizational Behaviors, Organizational charts, role grade/factory assistant manager, role of different clerk (active wise). Facilities provided to the Tea workers, benefits avail by the permanent workers of the estate, what are other welfare establishments seen in the garden.

UNIT-IV

Healthy and safety measures followed in a Tea garden

1 Credit (10 marks)

Various steps of health and safety measures followed in a Tea estate. Study on the health and safety related issues in details in order to maintain peaceful work environment in the Tea estate

Practical 40 marks

Cultivation practices of Tea to be done on the campus plantation area by formation of group among the students and results are based on performance.

Internal Assessment 20 marks

Repot to be made on the activities carried out in the practical.

Paper: S 5.1: Organic Tea and Specialty Tea management (6 credits)

Overview & key learning as per NOS:

In this paper the importance is given on tea plantation & processing practices using the organic methods, as the revolution of organic cultivation able to bring high demand in the market. Only natural inputs are applied in organic cultivation instead of inorganic or synthetic chemical. In organic cultivation vermi-compost plays a significant role, hence in this paper the student will learn about vermi-compost as well as acquire the skill to prepare the vermi-compost units. Again, this paper helps the students to know the importance of certifications and marketing of specialty.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Organic Tea plantation

1 Credit (10 marks)

Package and practices of organic Tea plantations from cultivation to processing

UNIT-II

Certification of Organic Tea.

1Credit (10 marks)

Methods of certifications, national standards of certifications and inspections, documentation methods for certification, various certifying agents.

UNIT- III

Organic manure

1 Credit (10 marks)

Definition of organic manure and its importance, Production method of various organic manure, Compost, Enriched compost and Vermi-compost, Method of application of organic manure. What is vermi-compost, preparation method of vermin-compost unit, cost of very-compost unit, importance of vermin-compost for own use and commercial value.

UNIT-IV

Speciality Tea and their marketing.

1 Credit (10 marks)

Various speciality Tea -Green tea, white tea, purple tea, hand-rolled tea, flavored tea. Marketing of specialty tea, their marketing scope and various channels of marketing.

Practical: 20 marks

Report on packaging practices of organic tea.

Internal Assessment: 15 marks

Assignment on the subjects studied in the semester.

Paper: S 5.2: Management of Farmer producing company and management of green leaves (6 Credits)

Overview & key learning as per NOS:

The objectives of this paper are to give more focus on FPC (Farmers producer company), prospect and problems of FPC. Here the students are able to develop the skill on how co-operative/company can be formed among the Tea growers group in an organized and systematic way, which will help in minimizing input cost of company and maximized the earnings through common marketing, minimize the leaf wastage, etc. in this chapter the students develops on how and an individual can be an entrepreneur or self-employed through FPC, also focus will remain on the policies for FPC develop by TBI as well as State governments.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Impact on social development

1Credit (20 marks)

Motivation of the unemployed youth towards the adaptations of FPC, how a successful FPC recognized in the society and how its influence helps in development in the society and also the existing lethargic FPC becomes proactive in the development of FPC by generating employment to uneducated/primary school dropouts youths in development of livelihood.

UNIT-II

Management of green leaves.

1Credit (10 marks)

Techniques of purchased or selling Tea leaves management, how the plucked leaves are stored up to the transportation period without damages in leaves or maintain the quality of the leaves to get the best market value, what practices followed in transportation in monsoon and dry weather conditions, how the cost control can be done to maximize profit. Field management practices affecting the quality of tea.

UNIT- III

Role of FPC and its operation practices.

1 Credit (10 marks)

Operational practices of FPC. SWOT analysis, institutional framework of FPC for development of Tea growers, price sharing formulae, quality up gradation programme, setting up of FPC.

UNIT-IV	
Tea Board Development and Plantation Scheme	
Detail study on the Tea Board development and plantation scheme under the Five-year plan for FPC of Assam and non-conventional area of North- east India.	1 Credit (10 marks)

Practical: 20 marks

Field visit to FPC & study details about their experiences in the Tea industry.

Internal Assessment: 15 marks

Assignment on the subject in the semester.

Paper: S 5.3: Major thrust area of small Tea Garden. (6 credits)

Overview & key learning as per NOS:

This unit will help the students in unfolding the major constrains and issues of the FPC experiences. So, it will be useful for the students to develop the skill of planning and executions of the same for the smooth running of the gardens, irrespective of doing job in commercial garden or become self-employment as an entrepreneur. The students will also able to understand the role of TBI and governmental institutions in developing the Tea growers of Assam and other parts of north-east India. This unit gives detail information regarding inter-cropping practices and drainage system

Total Marks: 100 Theory-40 + Practical-40 +Internal Assessments-20

UNIT- I

Problems of small tea growers of Assam and non-conventional area of North-east 1 Credit (10 marks) India.

Identification of problems faced by tea growers and how the non-conventional area can be transformed to large tea growing areas by common plan of action.

UNIT-II

Role of Tea board of India and other governmental institutions in developing tea 1 Credit (10 marks) growers of Assam and other parts of north-east India.

The role played by TBI and other governmental institutions I promotion and development of STG of Assam and other parts of north-east India. The role of respective state governments also in development of TG.

UNIT-III

Inter-cropping practices in Tea gardens and details of drainage systems.

1 Credit (10 marks)

What is inter-cropping and its importance, what are the crops that can be inert-cropped along with young tea, why selected crops are considered for inter-cropping, advantages of integrated farming system in Tea. Types of drains in different situation

UNIT-IV

Marketing and management of green leaves in Assam and other parts of north-east 1 Credit (10 marks) India.

Marketing of Tea leaves and its importance in terms of economic conditions of STG growers, how the leaves are managed and handled by the STG growers to minimize the damages and maximize the earning, importance of leaves management.

Practical: 40 marks

UNIT-I: Identification the role of governing body in developing FPC.

UNIT-II: Identification of how entrepreneurship as a profession develop by FPC.

UNIT-III: Documents and formalities required to form and FPC.

Internal Assessment: 20 marks

Assignment on what are the role and responsibility of governing body as well as members of FPC.

Paper- S 6.1: Exercise on operations followed in Tea Estate (6 Credits)

Overview & key learning as per NOS:

The main objective of this paper is that after going through the unit's exercise, the students will skill up with the nursery estimation of a given area, cost incurred in setting up of vermi-compost unit, cost of irrigation of a given land and also able to well acquaint with different field management implements.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

The cost calculation for Nursery Preparation

1 Credit (10 marks)

What is the Component of Nursery Preparation, how many man days required for a Nursery of Seed/ Clone? The Size of the Nursery will consider approx. 3 Bigha of land

UNIT-II

Exercise in cost evaluation for a 1 Ha land Irrigation

1 Credit (10 marks)

What is the machinery required, what is the size of the nozzle for disbursement of water up to 4-5 meter, by using Sprinkler irrigation?

UNIT-III

Various Implements use in Tea Management

1 Credit (10 marks)

Name of the implements and their function use in Garden, Factory & packaging activity

UNIT-IV

Exercise on Vermi-compost unit cost of different size

1 Credit (10 marks)

What are the components required for Vermi-compost unit Preparation, how many man days required & how many days required for starting commercial operation by selling the Vermi-compost?

Practical: 20 marks

Field Visit to Auction Centre, Tea Broker House & Ware House for Market Study

How the auction of tea done, what is broker house use role, How the tea is store in the Ware House?

Internal Assessment: 15 marks

Submission of report on the basis of visit to auction center/Tea broker house/& ware house.

B.VOC PROGRAMME in SMALL TEA GARDEN MANAGEMET (STGM)

Digboi College, Digboi -7867171, Assam

Paper: S 6.2: Skill up with cultivation practices (6 credits)

Overview & key learning as per NOS:

This units is made up to learn the various practices followed in a tea estate fields through internship itself by staying in a commercial garden, where they can explore their expertise knowledge & skill developed from the subjects they studied in the earlier course component of tea garden field management operation, from the land preparation to pruning including, nursery practices, vegetative propagation, different types of planting materials as per TBI recommended, planting, INM, IPM practices, irrigation & drainage, plucking & tipping, the students will do the practices in the college own land, after that move for internship, here also students able to know the report writing & also the contents need in a report writing or practical note submitting.

Total Marks: 75 Theory-40+ Practical-20 +Internal Assessments-15

UNIT- I

Management of Nursery 1 Credit (10 marks)

Details package & practices of nursery to be study theoretically & practically

UNIT-II

Management of Young tea 1 Credit (10 marks)

Details package & practices of nursery to be study theoretically & practically along with all practices.

UNIT- III

Management of Matured tea 1 Credit (10 marks)

Details package & practices of nursery to be study theoretically & practically along with all practices.

UNIT-IV

Management of Drainage & Irrigation operation 1 Credit (10 marks)

How drainage & Irrigation management practices followed in a tea estate & its importance.

Practical: 20 marks

Field work of the entire cultivation methods will be done in the college own land.

How the nursery practices followed also the young tea & matured tea maintenance Practices, how drainage is made & where catchment areas need to put for proper irrigation on the land.

Internal Assessment: 15 marks

Submission of report on the basis of the field work.

B.VOC PROGRAMME in SMALL TEA GARDEN MANAGEMET (STGM)

Digboi College, Digboi -7867171, Assam

Paper: S 6.3: Skill up with Management & processing practices (6 credits)

Overview & key learning as per NOS:

This paper is design to learn the various practices followed in a tea estate factory through internship itself by staying in a commercial garden, where they can explore their expertise knowledge & skill developed from the subjects they studied in the earlier course component of tea manufacturing process, from the tea leaves to made tea, sorting, grading and packaging & marketing operation. Here the students able to understand about a good report writing & also the contents need in a report writing or practical note submitting.

Total Marks: 100 Theory-40+ Practical-40 +Internal Assessments-20

UNIT- I

Management of the estate

1 Credit (10 marks)

What is management, how to handle the managerial role for the smooth running of the estate, control over the subordinate & other related factors.

UNIT-II

Leadership quality

1 Credit (10 marks)

What is the meaning of the leader; what are the quality needs to be good leader, how a different welfare activity handled.

UNIT- III

Management of made tea

1 Credit (10 marks)

Details package & practices of different quality/grade tea manufacturing techniques followed in an estate.

UNIT-IV

Management of packaging, grading & sorting

1 Credit (10 marks)

How the entire packaging, grading & sorting practices followed in a tea estate & its importance.

Practical: 40 marks

Field work of the entire management scaling will be done through internship programme.

2 months internship programme will be carry on by the student staying in different garden.

Internal Assessment: 20 marks

Submission of final report on the basis of internship programme.

ACHRONYMS

KEY WORD/TERMS	DESCRIPTION
AGR	AGRICULTURE
ETL	ECONOMIC THRESHHOLD LEVEL
FPC	FARMER PRODUCING COMPANY
INM	INTEGRATED NUTRIENT MANAGEMENT (scientific word)
IPM	INTEGRATED PEST MANAGEMENT (scientific word)
N	OCUPATIONAL STANDARD IDENTIFIER UNIT CODE IS DENOTED BY "N"
OJT	ON JOB TRAINING
S 1.1	"S" STANDS FOR SKILL; 1.1 -MEANS 1^{ST} SEM 1^{ST} PAPER, LIKE THIS WAY IT GOES SO ON UP TO 6.3
STGM	SMALL TEA GARDEN MANAGEMENT
STGs	SMALL TEA GARDEN
STG's	SMALL TEA GROWERS
SHG	SELF HELP GROUP

Record Keeping items in Tea Estate

PAYROLL MODEL		INVENTORY MODEL		
Employee Master Checklist Wages Register Ration Register Ration Summary Report Daily Kamjari for whole garden division wise Daily Attendance Sheet Activity Code wise attendance report for a particular period	Activity Master check list Weekly/ Fortnightly Attendance checklist Daily Control Sheet; Productive Man days / Unproductive Man-day's report comparison of productive & unproductive for a period (absolute and % wise) man days account head wise in descending order Summary of Work Force report for the garden today and to date; Leave Report PF deduction report; PF Ledger; PF Form 1; Pay book Summary report; Daily Green Leaf Report; Pluckers Range Report to detect low productivity pluckers through the system. Leave with Wages Register; Bonus Register; Census Book Loan/Advance detailed report; Absenteeism Report Number of days worked report; Housing Status report; Housing Master report; Sick Register; Welfare items issue report Staff Salary Register, Staff Monthly Summary Report; Staff Ration Register, Staff DA/VDA Summary Report; Staff Attendance Report, Staff Leave	Requisition Checklist Requisition for which Purchase Order (P.O.) not raised. Requisition partially executed Purchase Order date wise Purchase Order checklist Purchase Order print out Purchase Order fully executed Purchase Order fully executed Purchase Orders fully pending Stores Receipt Register (G.R.N); GRN for which bill is pending report Issue Register Bill Register; Stores Ledger Item Stock Balance Report Opening Stock Balance Report Essential/ Fast Moving Items Report	Item Group Wise Checklist Group Wise Issue Register (Month and YTD) Group Wise Stores Consumption Summary (Month and YTD) Account Sub Head Wise Item Consumption Stores Item Group Summary Total	Financial Accounting Payment / Receipt / Journal listing Bank Book; Cash Book General Ledger; Sub Ledger Expenditure listing of Cash & Bank Transactions Trial Balance 3M Expenditure of Accounts Statement (for the month and to date); Comparison of 3M Expenditure with the Budget (for the month and to date) Party Ledger — Detailed Transaction wise Party Ledger — Summary Cost Centre Ledger — Detailed transaction wise Cost Centre Ledger — Summary Bill by Bill Outstanding Balance Creditors Report List of Account Head & Sub heads.
FACTORY MODULE Sectional History year basis; Pruning Analysis (Year wise Section wise pruning history); Pruning wise sectional Yield; Pruning summary report — Year wise Division wise; Division wise section master listing; Drainage status report; Daily green leaf report Detailed daily Green Leaf Report Summary; Divisional weather report		BUDGETORY MODULE Month wise Allocation of Expenditure Plucking Man Days Calculation Report; Budget Top sheet. Summary budget Top Sheet Details	MANUFACTURING MODULE Dryer Log book; Tea grade sorting Details; Unsorted Tea / Tea wastage report; Packed Tea details; Daily factory report Invoice Register; Bought leaf Received report; Group garden leaf Received report; Reconciliation of Production Report Actual green leaf and factory green leaf weighment report Arrived green leaf & Manufactured Tea details for factory	



COURSE SYLLABUS FOR B.VOC PROGRAMME IN

TOURISM AND HOSPITALITY MANAGEMENT (THM)

UNDER DIBRUGARH UNIVERSITY

PREPARED BY



DEPT. OF B.VOC TOURISM AND HOSPITALITY MANAGEMENT Digboi College Digboi-786171, Assam

SCHEME AND SYLLABUS OF

B. Voc. TOURISM AND HOSPITALITY MANAGEMENT

INTRODUCTION:

The University Grants Commission (UGC) has launched a scheme on skills development based higher education as part of college/university education, leading to Bachelor of Vocation (B.Voc.) Degree with multiple exits such as Diploma/Advanced Diploma under the NSQF (National skill Qualifications framework). The B.Voc Programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles along with broad based general education. This would enable the graduates completing B.Voc to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

OBJECTIVE:

The B. Voc programmes are designed with the following objectives:

- a) To provide judicious mix of skills relating to a profession and appropriate content of General Education.
- b) To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.
- c) To provide flexibility to the students by means of pre-defined entry and multiple exit points.
- d) To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
- e) To provide vertical mobility to students coming out of 10+2 with vocational subjects.

COURSE DESIGN:

Regulations: The regulations stated in this document shall apply to B.Voc Programmes conducted by colleges affiliated to Dibrugarh University, sanctioned by University Grants Commission. The programme shall be called **BACHELOR OF VOCATION (B.Voc) TOURISM AND HOSPITALITY MANAGEMENT.**

ELIGIBILITY CRITERIA FOR ADMISSION:

The eligibility condition for admission to B.voc programme shall be 10+2 or equivalent, in any stream. Eligibility of admission, Norms for admission, reservation of seats for various B.Voc Programmes shall be according to the rules framed by the University from time to time.

DURATION OF THE PROGRAMME:

The duration of B.Voc programmes shall be 6 Semesters. The duration of odd semesters shall be from June to October and that of even semesters from November to March. There shall be three days semester break after odd semesters and two months vacation during April and May in every academic year. A Student may be permitted to complete the Programme, on valid reasons, within a period of 12 continuous semesters from the date of commencement of the first semester of the programme. The certification levels will lead to Diploma /Advanced Diploma /B.Voc. Degree and will be offered under the aegis of the University as outlined in the Table given below.

AWARD	DURATION
Diploma	6 months
Advance Diploma	12 months
B. Voc Degree	6 semester

EVALUATION ASSESSMENT, EXAMINATION AND GRADING SYSTEM:

The evaluation of each course shall contain two parts:

- i. Internal or In-Semester Assessment (ISA)
- ii. External or End-Semester Assessment (ESA)

The internal to external assessment ratio shall be 1:4, for all courses including practical. There shall be a maximum of 80marks for external evaluation and maximum of 20 marks for internal evaluation making a total of 100. For all courses (theory & practical), grades are given on a 07-point scale based on the total percentage of marks.

Theory Papers:

The external examination of all semesters shall be conducted by the University at the end of each semester. Internal evaluation is to be done by continuous assessment. For all papers (theory and practical) total marks of external examination is 80 and total marks of internal evaluation is 20 making a total of 100. Marks distribution for external and internal assessments and the components for internal evaluation with their marks are shown below.

For all theory papers:

- a) Marks of theory external examination: 80
- b) Marks of theory internal evaluation : 20

Internal Assessment:

All the three components of the internal assessment are mandatory. Components of the internal evaluation and their marks are as below.

Components of Internal Evaluation- Theory	Marks
Attendance	5
Assignment / Seminar / Viva	5
Test paper(s) (1 or 2)	10
Total	20 Marks

Assignments, Seminars and Test Papers:

- ✓ Assignments are to be done from 1st to 4th Semesters. At least one assignment per course per semester should be submitted for evaluation.
- ✓ A student shall present a seminar in the 5th semester and appear for Viva-voce in the 6th semester.
- ✓ At least one internal test-paper is to be attended in each semester for each course. The evaluations of all components are to be published and are to be acknowledged by the candidates. All documents of internal assessments are to be kept in the college for two years and shall be made available for verification by the University. The responsibility of evaluating the internal assessment is vested on the teacher(s), who teach the course.
- ✓ The internal evaluation report in the prescribed format should reach the University before the 4th week of October and March in every academic year.

External Examination:

The external examination of all semesters shall be conducted by the University at the end of each semester.

Pattern of questions for external examination for theory courses:

Questions shall be set to assess knowledge acquired, standard application of knowledge, application of knowledge in new situations, critical evaluation of knowledge and the ability to synthesize knowledge. The question setter shall ensure that questions covering all skills are set. He/she shall also submit a detailed scheme of evolution along with the question paper. A question paper will comprise objective type, short answer type, short essay type /problem solving type and long essay type questions.

Sections	Total no. of	No. of questions to	Marks of each	Total
Sections	questions	be answered	question	Marks
Section A	10	10	1	10
Section B	12	9	2	18
Section C	9	6	4	24
Section D	4	2	14	28
	35	27	-	80

Destination visit:

Students have to visit two major tourism destinations in the neighbourhood or vicinity of the institution as a case study and prepare a detailed report on the destination; its tourism importance and potential; problems or challenges faced; prospects for future development etc. A seminar / workshop can also be arranged.

Travel and Tour Services Internship:

Students have to undergo hands on comprehensive training or internship in a travel agency or tour operator firm for two to three weeks. They have to submit a training report also as part of the programme after the internship.

Study Tour:

Students have to participate in a field study tour that will be arranged by the department. This enables students to analyze the existing infrastructure and amenities of tourism development and examine future prospectus in tourism promotion. Students have to involve in pre tour and post tour reporting and finally submit a tour report.

Project / Dissertation:

All students are to do a project in the area of core course. The report of the project in duplicate is to be submitted to the department at the 6th semester and are to be produced before the examiners appointed by the University. External project evaluation and Viva/Presentation are compulsory and will be conducted at the end of the programme during the sixth semester. 20 % of marks are awarded through internal assessment.

For projects:

a) Marks of external examination : 80b) Marks of internal evaluation : 20

Components of project evaluation	Marks
Internal evaluation	20
Dissertation (External)	50
Voce (External)	30
Total	100

GRADING:

Grade and Grade Point For all courses (theory & practical), grades are given on a 07-point scale based on the total percentage of marks. (ISA+ESA) as given below:

Percentage of Mark	Grade	Grade Point
90 and above	A+- Outstanding	10
80 and below 90	A – Excellent	9
70 and below 80	B – Very Good	8
60 and below 70	C – Good	7
50 and below 60	D – Satisfactory	6
40 and below 50	E – Adequate	5
Below 40 F	– Failure	4
Absent	Absent	ab

Credit point and Credit point average Credit Point (CP) of a course is calculated using the Formula:

 $CP = C \times GP$, where C = Credit; GP = Grade point

Credit Point Average (CPA) of a Semester/Programme is calculated using the formula

CPA = TCP/TC, where TCP = Total Credit Point; TC = Total Credit

Grades for the different semesters and overall programme are given based on the corresponding CPA as shown below:

CPA	
Above 9	A+ - Outstanding
Above 8, but below or equal to 9	A – Excellent
Above 7, but below or equal to 8	B- Very Good
Above 6, but below or equal to 7	C- Good
Above 5, but below or equal to 6	D- Satisfactory
Above 4, but below or equal to 5	E – Adequate
4 or below	F- Failure

COURSE STRUCTURE

(B.VOC IN TOURISM & HOSPITALITY MANAGEMENT)

	SEMESTER- I			
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 1.1	FUNDAMENTALS OF TOURISM	CORE	6	
THM 1.2	PRINCIPLES OF MANAGEMENT	CORE	6	
THM 1.3	BUSINESS ENGLISH	AEC	2	
THM 1.4	ENVIRONMENTAL SCIENCE	GE	6	
			20	
	SEMESTER- II			
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 2.1	TOURISM AND TRAVEL INDUSTRY	CORE	6	
THM 2.2	MARKETING IN TOURISM	CORE	6	
THM 2.3	TOURISM ENTREPRENEURSHIP	CORE	6	
THM 2.4	GEOGRAPHY OF NORTHEAST INDIA	GE	6	
			24	
	SEMESTER- III			
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 3.1	HUMAN RESOURCE MANAGEMENT	CORE	6	
THM 3.2	INTRODUCTION TO HOSPITALITY	CORE	6	
THM 3.3	TOURISM FINANCE	CORE	6	
THM 3.4	TOURISM IN NORTHEAST INDIA	CORE	6	
THM 3.5	TOUR GUIDING AND LOCAL HANDLING	GE	4	
			24	
	SEMESTER- IV			
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 4.1	ECO - TOURISM	CORE	6	
THM 4.2	ADVENTURE TOURISM	CORE	6	
THM 4.3	WILDLIFE TOURISM IN ASSAM	CORE	6	
THM 4.4	BIRDWATCHING TOURISM IN NE INDIA	CORE	6	
			24	
	SEMESTER- V			
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 5.1	LEGAL & REGULATORY FRAMEWORK FOR TOURISM	CORE	6	
THM 5.2	IT FOR TOURISM	CORE	6	
THM 5.3	TOURISM RESEARCH	CORE	6	
THM 5.4	PRACTICAL APPROACH TO PHOTOGRAPHY	CORE	6	
			24	
SEMESTER- VI				
CODE	NAME OF THE PAPER	TYPE OF COURSE	CREDITS	
THM 6.1	PROJECT/DISSERTATION	CORE	6	
THM 6.2	TOUR PACKAGING & ITINERARY PLANNING	CORE	6	
THM 6.3	SALES AND ADVERTISING TOURISM	CORE	6	
TI 10 4 C 4	E-TOURISM	CORE	6	
THM 6.4	E-100KISIVI	COKL	U	

DETAILED SYLLABUS AND SCHEME

SEMESTER 1: THM 1.1: FUNDAMENTALS OF TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To invoke interest in students with basic concepts and contents of tourism studies

UNIT - I

Basic concepts & development of tourism: Tourism, excursion, leisure and recreation; tourist, visitor, traveller; History and evolution of tourism, Roman Empire and early travel, trade routes, concept of annual holiday, social(paid)Tourism; Grand Tour, dark age, renaissance in Tourism; Thomas cook & early organised travel; Modern day Mass Tourism.

UNIT - II

Typology and forms of tourism: International Tourism, Inbound, Outbound, inter regional, intra regional, domestic, internal, National Tourism; Types of Tourism.

UNIT - III

Tourism system & Environment: Components of tourism, Distribution, Interrelation between various segments, travel industry network, Elements of tourism, Tourism environment, Manila Declaration.

UNIT - IV

Tourism in India: Evolution of tourism in India; contemporary trends in Indian Tourism; Government initiatives towards promotion of tourism; Problems associated with tourism industry in India.

UNIT - V

Future growth and development of Indian tourism: 5 T's of Brand India; Major Tourism schemes of Govt. of India, Visa on Arrival (VoA), PRASAD Scheme, HRIDAY Scheme, Travel Circuits; Incredible India.

Books Recommended:

- Holloway, J. C. (1994) The Business of Tourism, Pitman Publishing, London. "(L)"
- Swan, Sampad Kumar, and Mishra, Jitendra Mohan (2012). Tourism Principles and Practices, Oxford Higher Education. "(L)"
- Burhat & Madlik Tourism-Past, Present and Future, Heinermann, London
- Pearce, D. G., & Butler, R., Contemporary Issues in Tourism Development, Psychology Press. 1999

Reference:

- P.N Seth: Successful tourism Management (Vol. 1 & 2), Sterling Publishers, New Delhi
- A.K Bhatia: International Tourism Management, Sterling Publishers
- Christopher.J. Hollway; Longman; The Business of Tourism
- Cooper, Fletcher et al, (1993), Tourism Principles and Practices, Pitman

SEMESTER 1: THM 1.2: PRINCIPLES OF MANAGEMENT

No. of Credits : 4

No. of instructional Hours : 4 Hours per week

Course Objectives: To provide basic knowledge of the principles of management.

Unit - I

Introduction to Management: Organization management; role of managers; evolution of management though; organization and the environmental factors; functions of management; social responsibility of management; environment friendly management

Unit - II

Planning: Nature and purpose of planning; planning process; types of plans& objectives; managing by objective (MBO) strategies; types of strategies& policies; decision making; types of decision; decision making process; rational decision making process; decision making under different conditions.

Unit - III

Organising: Nature and purpose of organizing; organization structure; formal and informal groups/ organization; line and staff authority; departmentation; span of control; centralization and decentralization; delegation of authority; staffing; selection and recruitment; orientation; career development; career stages; training; performance appraisal.

Unit - IV

Directing &Controlling: Managing people; communication; hurdles to effective communication; organization culture; elements and types of culture, managing cultural diversity. Process of controlling; types of control; budgetary and non-budgetary control techniques; managing productivity; cost control; purchase control; maintenance control; quality control planning operations.

Unit - V

Corporate social responsibility- meaning of CSR (corporate social responsibilities) CSR towards different groups – social audit – business ethics and corporate governance- social performance of business in India

- Moshal.B.S. Principles of Management, Ane Books India, New Delhi.
- Bhatia R.C. Business Organization and Management, Ane Books Pvt. Ltd., NewDelhi
- Richard Pettinger. Introduction to Management, Palgrave Macmillan, New York.
- Koontz and O'Donnel. Principles of Management ,Tata McGraw-Hill Publishing Co.Ltd. New Delhi.
- Terry G.R. Principles of Management, D.B. Taraporevala Sons & Co.Pvt.Ltd., Mumbai.

SEMESTER 1: THM 1.3: BUSINESS ENGLISH

No. of Credits : 4

No. of instructional Hours : 4 Hours per week

Course Objectives: To provide basic knowledge of Business English for day to day communication.

Unit - I

Grammatical Focus: Grammatical &structural aspects covering parts of speech; tense; voice; clause; preposition; degrees of comparison; synonyms & antonyms etc.; identifying & analysing grammatical errors including errors in spelling & punctuation. Grammar -; words often confused; one-word substitution; phrases; idioms.

Unit - II

Reading: Vocabulary building; comprehension; interpretation; summarizing.

Unit - III

Writing: Letter writing – formal; informal; accepting & declining invitations; paragraph writing; precise writing, essay writing. Effective business writing - correspondences; letter, fax, e-mail for making enquiries; placing orders; asking & giving information; registering complaints; handling complaints; drafting notices; drafting advertisements; job applications.

Unit - IV

Speaking: Interactive communication like introducing self; greetings; conversations; pronunciation: appropriate stress; intonation; clarity; business etiquettes; impromptu speech; debate; role play; presentations.

Unit - V

Listening: Understanding – spoken English; formal English and business-related conversations.

- Kumar, Inderjit& Kumar, Sanjay. A Course Book of English Grammar, Composition and Translation.
- Bapna, Anil &Bapna, Raj (2015) How to Write and Speak Effective, Powerful and Fluent English.
- Marks, Jonathan. English Pronunciation in Use. New Delhi: CUP, 2007.

SEMESTER 1: THM 1.4: ENVIRONMENTAL SCIENCE

No. of Credits : 4

No. of instructional Hours : 4 Hours per week

Course Objectives: To enable the students to acquire basic ideas about environment and emerging issues about environmental problems and remedies.

UNIT - I

Basic principles: Ecology, Environment and Eco System; biological levels of eco system; relationship of ecology and tourism; tourism activities and their linkages to ecology; environment pollution; environmental impact of tourism

UNIT - II

Eco Systems and their relation with tourism: Introduction to wetland sites; coral reefs; mangroves; national parks; wild life sanctuaries; biosphere reserves and their role in tourism

UNIT - III

Environmental Concerns: Factors creating environmental concerns-rise in temperature; melting of snow caps; rise in sea level; monsoon and its changes; role of tourism in environmental concerns; impact of environmental concerns on tourism; prevention of environmental hazards.

UNIT - IV

Addressing Environmental Concerns: Environmental Conventions; ecotourism; responsible tourism; voluntary tourism; community based tourism; pro-poor tourism including STEP; eco-friendly practices and energy waste management; Concept of Sustainable tourism development.

UNIT - V

Institutional Support: International Organisations for environment and wildlife; UN Initiatives on ecology and environment; national policy on ecology and environment; Environmental Impact Assessment (EIA) – need for EIA; steps of EIA; method; usage of EIA. Environment and Tourism – prospects and challenges

- Misra. S.P and Pandey .S.N. Essential Environmental Studies, Ane Books India, New Delhi. 14 university of kerala, scheme and syllabus, b.voc (tourism and hospitality)
- Kiran B. Chokkas and others. Understanding Environment, Sage Publications New Delhi.
- Arumugam N. and Kumaresan V. Environmental Studies, Saras Publications, Kanyakumari
- Benny Joseph. Environmental Studies, Tata McGraw-Hill Publishing Co.Ltd., New Delhi.
- Kumar, A. (2008), A Text Book of Environmental Science, APH Publishing House, New Delhi.
- Bharucha, Ecach (2013), A Text Book of Environmental Sciences for UG, Orient BlaskSwan, New Delhi.

SEMESTER 2: THM 2.1: TOURISM AND TRAVEL INDUSTRY

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge about tourism as an industry and its contribution towards

economic growth.

UNIT - I

Introduction to Tourism Industry & Travel Intermediaries: Tourism Industry: meaning; structure and its parts. Travel Intermediaries: concept, definition, types of intermediaries and differences among types of tourism intermediaries, levels of tourism distribution. Importance of Tourism intermediaries; historical development and changing dimensions of Tourism Intermediation

UNIT - II

Tourism as an industry; contribution of tourism sector towards revenue and employment generation; emerging trends in the tourism industry; Contribution of Tourism industry towards GDP

UNIT - III

Tour Operator: Definition; types and role of tour operator; Main product of Tour Operator – Tour Package and its types. Functions of tour operator – tour package formulation; marketing and sales of tour package; Tour Brochure; tour execution and operations. Distribution Network of tour operator .IT Revolution and its Impact on Tour Operator. Linkages with Tourism Principals /Suppliers

Unit - IV

Major organisations in the global travel industry: Thomas Cook, Cox & Kings and other important tour operators of India; Accommodation industry- Hotel, Resort, Lodge, Cruise, Houseboat; Classification of hotels in India

Unit - V

National and state level tourism policies; National and International regulations applicable for travel business; Regulatory framework for hotel and food service in India

- Seth, P.N., Successful Tourism Management, Sterling Publishers, New Delhi, 2011.
- Pender, L., Travel, Trade and Transport: An Introduction, Continuum, Landon 2001

SEMESTER 2: THM 2.2: MARKETING IN TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge about the role of marketing in tourism

Unit - I

Marketing: Introduction to tourism marketing: Definition; nature & scope of tourism marketing; process growth of tourism marketing; Understanding the needs, want, demands, value and satisfaction, evolution of marketing

Unit - II

Market targeting: Concept of market segmentation; targeting and positioning; Types of segmentation; Marketing mix. Unit III Product issues: Types of products; product mix dimensions; product strategies, product life cycle.

Unit - IV

Pricing: Concept of price, factor influencing tourism pricing, method of price fixation; pricing strategies; Distribution channels- Nature importance distribution system; Marketing intermediaries

Unit - V

Promotion: Concept of Promotion and Communication; objectives and importance of marketing promotion and communication; promotion mix; components of promotion mix; factor affecting promotion mix, types of marketing promotion and communication tools.

- Alan Jefferson & Leinard Lickorish- "Marketing Tourism".
- Andrew Vladimir- A Comlete Travel marketing handbook, NTC, Business Books, Illionis 1990.
- Braden, P.V. and Wiener, L., Tourism Marketing and Management Issues, George Washington University, 1980.
- Christopher, H. Lovelock Services Marketing, Prentice Hall, Eaglewood Cliffs, 1984.
- Kotler, Philip, Bowen, John and Makens James (2009). Marketing for Hospitality and Tourism. New Delhi: Prentice Hall/ Pearson Education. (L)

SEMESTER 2: THM 2.3: TOURISM ENTREPRENEURSHIP

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To build entrepreneurial mindsets among the students

Unit - I

Introduction to Entrepreneurship: Entrepreneurship- Definition, Role and expectation. Entrepreneurial motivations, Types; Entrepreneurship opportunities in tourism; Entrepreneurial skill for travel, Tourism and hospitality trade; Problems of entrepreneurship in travel trade

Unit - II

Small Scale Enterprises: Characteristics of an entrepreneur, Functions, Entrepreneurial traits and qualities; Classifications of entrepreneurs, Entrepreneur vs Manager, Entrepreneurial competencies, Understanding enterprises, Franchises & buyouts, Family business, Small business and large business, Company, etc.

Unit - III

Government Policy on Tourism: Institutional interface and Set up; Government policy; Tourism enterprises/units eligible for assistance under MoT scheme; Relevance of "Start-up India, Stand-up India" in the context of tourism

Unit - IV

Entrepreneurial Process: Identification of opportunity, Market assessment, Analysing competitive situation, Understanding trade practices, Resource mobilization; Ownership structures and organizational framework.

Unit - V

Business Plan: Technology determination, Site selection, financial planning, Financial institutions for small enterprises; Elements of Business Plan, Preparation of Business Plan, Feasibility report

- Lowry, L., Introduction to Entrepreneurship Resources for Feasibility Study Research Business, Librarian James A. Gibson Library Brock University, 2007
- Drucker, P.F., Innovation & Entrepreneurship, Harper Business, 2006.
- Page, S. & Ateljevic, J., Tourism and Entrepreneurship: International Perspectives, Routledge, 2009.
- Khanka, S. S., Entrepreneurial Development, S. Chand & Company Ltd, New Delhi, 4th Edition, 2007.
- Bhuyan, A., Tourism Entrepreneurship in Assam, VDM Verlag, 2010.
- Botha, M., Wessels, F.F. & Lubbe, B., Tourism Entrepreneurs, Juta Legal and Academic Publishers, 2007

SEMESTER 2: THM 2.4: GEOGRAPHY OF NORTHEAST INDIA

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge on the geography of Assam and its neighbours.

Unit - I

Introduction to Geography – Definition, scope and contents of geography of tourism – Physical Geography; Major land forms – Mountains, Plains, Plateaus; Natural regions of the World

Unit - II

Geography of Assam: Rivers and drainage system; vegetation and forest; climate; major tourists destinations

Unit - III

Geography of Arunachal Pradesh: Rivers and drainage system; vegetation and forest; climate; major tourists destinations

Unit - IV

Geography of Meghalaya and Nagaland: Rivers and drainage system; vegetation and forest; climate; major tourists destinations

Unit-V

Geography of Mizoram, Manipur and Tripura: Rivers and drainage system; vegetation and forest; climate; major tourists destinations

- Bhagabati, Kar & Bora, Geography of Assam, Rajesh Publications; Paper Back edition (2012)
- Bhattacharya.N.N; Assam: A systematic Geography; Rajesh Publications; 2011
- Dikshit & Dikshit; North-East India: Land, People and Economy (Advances in Asian Human-Environmental Research); Springer; Softcover reprint of the original 1st ed. 2014 edition
- Bordoloi, J.; Northeast India: A Regional Geography; Cyber Tech Publication

SEMESTER 3: THM 3.1: HUMAN RESOURCE MANAGEMENT

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge on effective management of Human Resources in an organisation.

Unit - I

Concept of HRM, Its importance and challenges, Objectives and functions, Policies, Procedure and Programme; Contemporary Issues in HRM

Unit - II

HRM in service industry, Differences of tourism HRM with other industrial sectors, Emerging trends and perspectives of HRM in Tourism.

Unit - III

HR Planning: Definition, Need and process, Job analysis, Job description and specifications Unit-IV Recruitment and selection: different methods of recruitments, Process of recruitment and selection, Placement and induction process. Employee Training and Development: Need of training, Methods for evaluation of training needs and its process, Career planning.

Unit- V Performance Monitoring and Appraisal: Meaning, Importance and Purpose, Techniques of appraisal; Discipline and Disciplinary action, Employee grievance handling process

- Nickson, D., Human Resource Management for Hospitality and Tourism Industries, Elsevier (Butterworth-Heinemann), 2007.
- Dessler, G., Human Resource Management, Pearson, New Delhi, 2008.
- Ashwathappa, K., Human Resource and Personnel Management, Tata Mc Graw Hill, New Delhi, 3rd Ed. 2004.
- Madhukar M., Human Resource Management in Tourism, Rajat Publishing, New Delhi, 2000.

SEMESTER 3: THM 3.2: INTRODUCTION TO HOSPITALITY MANAGEMENT

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To introduce the student to the world of Hospitality industry in general and to develop the hospitality culture among the students

UNIT - I

Definitions: Hospitality and Hotel. - Link between Hospitality and Travel and Tourism industry: Travellers at rest, Home away from Home - Hospitality culture, Athithidevo Bhavah, Expectations of the guest

UNIT - II

Classification & Categorization of Hotels - Hotel Ownership; A brief account of Commercial Hotels, Residential Hotels, Resort Hotels, Airport hotels, Bed & Breakfast Hotels, Convention hotels, Casino Hotels, Motels; Emerging trends in Accommodation - Time-share, Condominium, Home Stays, Tree Huts, Houseboats, Capsule hotel. Major Hotel chains in India

UNIT - III

Brief Account of Hotel Operations: Front office and back office areas, Public and Private areas - Organizational structure and Functions - Major Departments - Types of hotel rooms – Use of IT in Hotel industry

UNIT - IV

Front Office Management: Organizational structure and Functions House Keeping: Organizational structure – important housekeeping activities in hotels – coordination with other departments – advantages of good housekeeping and problems of poor housekeeping. Food and Beverage Operations: Organizational structure and Functions - Food Production and Service. Restaurants: Types of Menu, Types of Service

UNIT - V

Homestays- Concept, features, advantages; Homestays in northeast India; Target Audience; Developing Homestays

- John R Walker Introduction to Hospitality Management Pearson Education India
- Mohammed Zulfiker Introduction to Tourism and Hotel Industry, UBS Pub, New Delhi
- Dennis . L. Foster VIP and Introduction to Hospitality ,Mc Graw Hill, New Delhi
- M. L. Ksavana and R. M. Brooks Front Office procedures ,Educational Institute. A.H.M.A
- Sudhir Andrews Hotel front Office Management. Mc. Graw Hill, New Delhi

SEMESTER 3: THM 3.3: TOURISM FINANCE

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge on the various sources of business finance available to a

tourism provider

UNIT - I

Business Finance- Introduction, features, types, importance; fixed capital and working capital; Sources of Business finance: long-term, medium-term and short-term sources of business finance; advantages and disadvantages of various sources of finance.

UNIT - II

Sources of financing tourism projects: Tourism Finance Corporation of India (TFCI), Government sponsored schemes and other agencies; Hotel and Travel Agency accounting.

UNIT – III

Central government tourism schemes: Start-up-India, MDA; State sponsored Financial Assistance for tourism products; Amar Alohi Scheme

UNIT - IV

Estimating financial funds requirement; Sources of finance – banks, various financial institutions (including IFCI, ICICI, IDBI and SIDBI), financing of small scale industries in developing countries

SEMESTER 3: THM 3.4: TOURISM IN NORTHEAST INDIA

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge on the various sources of business finance available to a

tourism provider

UNIT - I

Trends in domestic and foreign tourists' arrivals in India- especially in Northeast India; Major tourist attractions in Northeast India

UNIT - II

Fairs and Festivals: Kherai dance, Mohoho, Joydam Festival, Hangseu Manaoba, Ali Ai Ligang, Me Dam Me Phi, Mono Ke-En, Bihu, and Ambubachi (Assam) Saga Dawa, Losoong, Namsung or Nambone Bhumchu at Tashiding (Sikkim) Mangan Music Festival Ka Shad Suk Mynsiem, Ka Pom-Blang Nongkrem, Dorbar Shnong (Meghalaya) Kut-Festival, Gang-Ngai-Festival, Cheiraoba, Ningol Chak-Kouba, Lui-Ngai-Ni (Manipur), Sekrenyi, Ngada, Mimkut Bushu, Thsukhenyie & Sukrenyu, Naknyulem, Moatsu, Metumniu, Hornbill Festival (Nagaland), Chapchar Kut, Pawl Kut Festival, Thalfavang Kut Festival (Mizoram), Losar Festival, Saga Dawa, Sangken Festival, Tamladu Festival, Torgya, Ziro Music Festival (Arunachal Pradesh), Pilak Festival, Neermahal Festival, Pous Sankranti, Kharchi Festival (Tripura)

UNIT – III

Folk Dances and Folk Songs: Bihu, Bagurumba, Bhortal Dance, Jhumur Dance (Assam) Hajgiri, Lebang Bumani Dance (Tripura), Thang-ta & Dhol-Cholom (Manipur), Nongkrem (Meghalaya), Bardo Chham (Arunachal Pradesh), Cheraw Dance, Khuallam, Chailam, Chawnglaizawn (Mizoram), Lu Khangthamo, Rechungma, Namsung or Nambone Bhumchu, Yak Chaam & Singhi Chaam, Mask Dance (Sikkim).

UNIT - IV

Pilgrimage destinations of NE India; Other Attractions: Hill stations; Endangered Orchids of Northeast India; Tribal villages; Festivals: Hornbill festival, Tawang Festival, Menchuka Festival, Pangshu-pass festival, etc.

- Bora, S., & Bora, M., The Story of Tourism-An Enchanting Journey Through India's North-East, UBS Publishers' Distributors Ltd, 2006
- Datta, Birendranath, N.C, Sarma and Prabin Das (eds.) A Handbook of Folklore Materials of North East India. Guwahati, ABILAC, 1984.
- Goswami, P., Festivals of Assam, Guwahati, ABILAC, 1995
- Dikshit, K.R., & Dikshit, J.K., North-East India: Land, People and Economy, Springer Netherlands, 2014

SEMESTER 3: THM 3.5: TOUR GUIDING AND LOCAL HANDLING

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To provide knowledge on the various sources of business finance available to a

tourism provider

UNIT - I

Concept of Tour Guiding: Meaning, Emerging areas of tour guiding-Prerequisites for becoming a Tour Guide- Tour guide as profession, Skills, Interests and Qualities; Understanding the safety of tourists; Duties and Responsibilities: Dealing with arrivals and departures, Luggage Pull and Transfer to Hotels, Check in, Check out, Knowledge about other services, Billing, Route map preparation, Pre Tour and post tour briefing and presentation.

UNIT - II

Group leading skills: Greeting participants, leading the participants, Skills in leading a group, Welcome speech. General instruction to participants at monuments, preparing tourists for cultural shock, Sacred places, Crowded areas, Giving commentary, answering Questions, Concluding a tour; Tour guides and environmental consciousness.

UNIT – III Knowledge about travel formalities: Passport, Visa, Health requirements, Taxes, Customs, Currency, Travel insurance, Baggage and airport information; Special Permits, Protected Area Permits, Restricted Area Permits; Knowledge about special arrangement for travellers, Complain handling skills; Knowledge about First Aid and life saving measures, Importance of Physical Health Culture for a Guide.

UNIT-IV

Co-ordination: Coordinating with participants, conducting various types of tours, Relevant and accurate information delivery. Knowledge in foreign exchange, Reading of maps and charts, Reaction in emergency situation, Disaster management; Ensuring cooperation from police and other authorities and dealing with them.

UNIT-V

Practical: Real life guiding project on reputed nearby attractions (Cultural & pilgrimage attractions, Wildlife & Natural landscapes)

- Pond, K.L., The Professional Guide: Dynamic of Tour Guiding, Van Nostrand Reinhold, New York, 1993.
- Chowdhury, N., Handbook for Tour Guides, Matrix Publishers, New Delhi, 2013.
- Collins, V. R., Becoming a Tour Guide, Continuum, London, 2002.
- Goddy B. & Parkin I., Urban Interpretation- Issues and Settings, Techniques and Opportunities, Working Papers, School of Planning, Oxford Polytechnic, 1991.

SEMESTER 4: THM 4.1: ECO-TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize students with the concept of Eco Tourism.

UNIT - I

Emergence of Ecotourism, concept and definitions, growth and development- Ecotourism principals, profiling the eco tourists, Mass and alternative tourism, potential benefits from ecotourism

UNIT - II

Eco Tourism Resources in India: National Parks, Wild life sanctuaries, Tiger reserves, Biosphere reserves, wetlands, coral reefs, desert ecotourism.

UNIT - III

National Tourism Policy: Guidelines for ecotourism development for government, for developers and operators, for visitors and for host population

UNIT - IV

Eco Tourism and Development: Community awareness and participation Contribution of ecotourism to environmental Conservation: Socio-cultural conservation and economic conservation

UNIT - V

Entrepreneurial Activities in the context of Eco Tourism in Northeast India.

- Bhatia, A. K., International Tourism, Sterling Publishers, New Delhi
- Bhatia, A. K., Tourism development: Principles, Practices and Philosophies, Sterling Publishers, New Delhi
- McIntosh, Robert, W. Goldner, Charles, Tourism: Principles, Practices and Philosophies, JohnWiley and Sons Inc. New York, 1990 (9th edition)
- Mill, Robert Christie and Alastair M. Morrison, The Tourism System, Englewood 5. Cliffs, N.J., Prentice Hall, 1985
- Negi, J.M.S., Tourism and Travel- Concepts and principles, Gitanjali Publishing

SEMESTER 4: THM 4.2: ADVENTURE TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize students with the concept of Adventure Tourism.

Unit - I

Introduction to Adventure and Adventure Tourism: Importance and definitions; history of adventure tourism; classification and elements of adventure tourism.; difference between adventure and sports.

Unit - II

Introduction to Land Based Adventure: hiking; trekking; rock climbing; repelling, bouldering; skiing and safaris. Equipment used in land based adventure tourism. Popular land based adventure places in India.

Unit - III

Introduction to Water Based Adventure: Snorkelling; scuba diving; rafting; kayaking; canopying and surfing. Equipment used in water based adventure tourism. Popular water based adventure places in India.

Unit IV Introduction to Air Based Adventure: Paragliding, sky diving, bungee jumping, hang gliding, ballooning, micro light flying etc. Equipments used in air based adventure tourism. Popular air based adventure places in India.

Unit - V

Major Adventure Based Organizations and institutions in India; Various courses offered in institutions; Scope and prospects of Adventure Tourism in Northeast India; Emerging trends of Adventure Tourism.

- Buckley, Ralf (2006). Adventure Tourism. CAB International.
- Malik, S.S. (1997); Adventure Tourism, New Delhi: Rahul Publishing.
- Negi, J. (2001) Adventure Tourism and Sports Part- I & II, New Delhi: Kanishka Publisers.
- Hoye, R., Smith, A. C., Nicholson, M., & Stewart, B. (2015). Sport management: principles and applications. Routledge New
- Som, D., Moore, S.A., Dowling, R.K. (2004. Natural Area Tourism, New Delhi, Viva Books.

SEMESTER 4: THM 4.3: WILDLIFE TOURISM IN NORTHEAST INDIA

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize students with the concept of Wildlife Tourism.

UNIT - I

Wildlife Tourism- an Introduction; Features, Scope, Importance, Advantages, Disadvantages Impact of Wildlife Tourism, Potentiality for growth

UNIT - 2

Wildlife of Northeast India: Floral & Faunal Diversity; National Parks, Wildlife Sanctuaries, Reserve Forests, IBA sites, Ramsar Sites, Wetlands, Zoos and Botanical Parks.

UNIT - 3

Threatened Species of Northeast India- Mammals, Reptiles, Birds, and Butterflies

UNIT - 4

Wildlife habitat- threats; Conservation of Wildlife- importance, issues associated with wildlife conservation in Northeast India; Man-animal conflict; Role of NGOs; Conservation History of Kaziranga National Park; Project Tiger

UNIT - 5

Ethical issues concerning wildlife tourism

- Rajesh Gopal 2011 Fundamentals of Wildlife Management Natraj Publishers Dehradun.
- Seema Bhatt 2011 Ecotourism Development in India communities' capital and conservation Foundation Books Publishers.
- Chowdhury, A.; Threatened Birds of Assam; Gibbon Publication

SEMESTER 4: THM 4.4: BIRDWATCHING TOURISM IN NE INDIA

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize students with the concept of Birdwatching Tourism.

UNIT - I

Birdwatching – an Introduction; Evolution of birdwatching as a hobby- global scenario; Evolution of Birdwatching- Indian scenario; Birdwatching in northeast India

UNIT - II

Birdwatching as an economic activity; Birdwatching tourism- global and Indian scenario; Present trends in birdwatching tourism; Scope of Birdwatching tourism in northeast India

UNIT - III

Avian diversity of northeast India; Birdwatching Destinations of northeast India; problems associated with birdwatching in northeast India

UNIT - IV

Birdwatching and Photography; entrepreneurial activities with regard to birdwatching tourism; problems associated with photographing birds- northeast perspective

UNIT - V

Bird habitats; resident and migratory bird species of northeast India; Habitat loss: reasons and solutions; taboos associated with certain bird species in northeast India.

- K.K.Dwivedi, 'Incredible Dibru-Saikhowa National Park' (2009)
- Asad R. Rahmani & Anwarruddin Choudhury, 'Threatened Birds of Assam'; Oxford University Press, ISBN 978-0198090533 (2012)
- Pamela C. Rasmussen & John C. Anderton, 'Birds of South Asia: The Ripley Guide', Volume 1 & 2, Second Edition; Lynx Publication
- Grimmett, Inskipp & Inskipp, 'Birds of the Indian Subcontinent', Second Edition, Oxford Publication
- Grewal, Sen, Singh, Devsar & Bhatia, 'A Pictorial Field Guide to Birds of India, Pakistan, Nepal, Bhutan, Sri Lanka & Bangladesh', Om Books International (2016)
- Salim Ali, 'The Book of Indian Birds', Oxford Publication (2003)
- Collar, Andreev, Chan, Crosby, Subramanium & Tobias, 'Threatened Birds of Asia: The Birdlife International Red Data Book', Birdlife International (2001)

SEMESTER 5: THM 5.1: LEGAL & REGULATORY FRAMEWORK FOR TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize the students with the ethical and legal aspects of tourism sector.

UNIT - I

Defining ethics and its significance in tourism; Principles and practices in business ethics; Business compulsions, motivation and ethical parameters

UNIT - II

Laws relating to accommodation, travels agencies land tour operation sector, Law regulations related to airlines and airways, laws related to surface transport; DGCA formalities for business and recreational flying in India

UNIT - III

Special permits to restricted areas for foreign tourist in India, restricted area in India for foreign tourists and related authorities at these places to obtain permits, permits related to various monasteries and wild life areas and their procedure

UNIT - IV

Travel Insurance and consumer protection act, International consumer protection acts in tourism, Evacuation and International insurance business, foreigners act, passport act and visa extension; Ancient Monument Act, RTI, Laws related to environment and wildlife

UNIT - V

Safety and security of tourist, Tourist Police, place of Tourism in the constitution, need of tourism legislation

- Tourism Guide lines published by Govt. of India, Ministry of Tourism.
- Tourism guidelines issued by Department of Tourism for hotel and restaurant operation.
- Sajnani Manohar (1999) Indian Tourism Business : A Legal Perspective, New Delhi.
- R. K. Malhotra (2005) Socio Environmental and Legal Issues in Tourism, New Delhi.
- Gupta S.K. (1989) Foreign Exchange Laws and Practice, Taxman Publications Delhi.

SEMESTER 5: THM 5.2: IT FOR TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize the students with business situation demanding technology.

UNIT - I

Basic Computer Concepts: Introduction, Evolution, Different generations of computer hardware, Hardware and software, Programming languages, Basic computer applications; General idea of information and communication technologies.

UNIT - II

Computer Hardware: Input and Output devices; Memory (or storage) devices; Central Processing. Computer Software: Types- System and application. Cyber Crime & Virus: Computer Virus, Types of Viruses, Use of Antivirus software, Ethical Issues & Cyber Law

UNIT - III

Introduction to MS Office: MS-Word: Introduction, Starting MS-Word, MS-Word Screen and its Components, Elementary Working with MS-Word MS-Excel: Introduction, Starting MS-Excel, Basics of Spreadsheet, MS-Excel Screen and Its Components, Elementary Working with MS-Excel MS-Powerpoint: Introduction, Starting MS-PowerPoint, Basics of PowerPoint, MS-PowerPoint Screen and Its Components, Elementary Working with MS-PowerPoint

UNIT - IV

Computer networks– Basic concepts of computer networks; local area networks and wide area networks; switches, hubs, routers, idea of distributed systems; Internet: Introduction, Internet evolution Working of Internet, Use of Internet Overview of World Wide Web (Web Server and Client)

UNIT - V

Internet Applications: Introduction to Search engine; Introduction to Web Browsers, working with E-mail (creation and use of the same), Website layouts and navigations. Technologies: Cloud Computing, Electronic payment system, DBMS, Google Business.

- Bharihoke, Deepak (2013); Fundamentals of Information Technology (Third Edition), New Delhi: Published by Excel Books (2006)
- Basandra, S. K. (1995); Computers today. Galgotia Publications Pvt Limited.
- Rajaraman, V., & Adabala, N. (2014). Fundamentals of computers. PHI Learning Pvt. Ltd.

SEMESTER 5: THM 5.3: TOURISM RESEARCH

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarize students with Research methodology in tourism sector.

UNIT - I

Introduction: Meaning, Objectives and Significance of Research; Types of Research, Research process. Social Science Research: Meaning, Scope and Objectivity of Social Science Research, Ethics in Social Science Research. Tourism Research: Major areas for research in Travel and Tourism, Challenges and status of Tourism Research in India.

UNIT - II

Research Design: Meaning, need and important features, & steps: Types of research design, selection and formulation of research problem. Hypothesis: Nature and role in Social Sciences. Measurement and scaling techniques: Measurement in research, measurement scales, tests of sound measurement, techniques of developing measurement tools, scaling, meaning, classification & its techniques.

UNIT - III

Sampling design: Census is sample survey, sampling techniques or methods, sample design and choice of sampling techniques; sample size, sampling & non- sampling errors. Data collection: Sources of data required, methods of collecting primary data, observation, interviews method, the questionnaire, mail survey, projective techniques simulation vs. experimentation.

UNIT - IV

Data processing: Introduction, editing of data, classification and coding of data, transcription, tabulation, graphical presentation of data. Data analysis: statistical analysis, hypothesis testing Chi-square (X2) Test. analysis of variance (ANOVA); Report writing and presentation: substance of reports, formats of reports, presentation of reports; Computer Applications in Research SPSS.EXCEL etc.

- Wilkinson & Bhandarkar; Methodology and Techniques of Social Research
- O.P. Krishnaswami; Methodology of Research in Social Sciences
- Sadhav Singh, Research Methodology in Social Sciences, Himalaya Publishing House, New Delhi, 1996.
- C.R. Kothari, Research Methodology, Vishwa Prakashan, New Delhi (2003)
- Salkind Neil J. Exploring Research, 3rd Edition, Prentice Hall, New Delhi (1997)

SEMESTER 5: THM 5.4: PRACTICAL APPROACH TO PHOTOGRAPHY

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To make students learn the basics of photography for promoting tourist

destinations.

UNIT - I

Digital Photography: Introduction; scope; basic Components; digital Cameras, know your Camera; Travel preparations at the destinations.

UNIT - II

The Art of Photography: Moments in time; exposure triangle; composition parameters; light; moving subjects; creative shooting; An Introduction to Selfies.

UNIT - III

The Subjects: People; landscapes, the urban environment; festivals, entertainment; food &drink, wildlife.

UNIT - IV

Post-Production – Basic Photo Editing Software; basics of Adobe Photoshop, sharing photos; blogs; selling travel Images. Being a Travel Photographer

UNIT - V

Hands on Camera: practical lessons on photography

- Srivastava, Mukesh (2012). Digital Photography, Unicorn Books, New Delhi
- Richard L'Anson (2014). Guide to Travel Photography, Lonely Planet Publications.

SEMESTER 6: THM 6.1: PROJECT / DISSERTATION

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To make students work in the research field and gain research experience.

The students will undertake the project work on the topic assigned by the concerned guide in consultation with the department on the various issues, problems, themes, case studies, tourism organization study, field survey and relevant aspects pertaining to the tourism industry. They have to submit a comprehensive tour report to the department which will be valued externally at the end of the programme. There will be a viva voce also externally at the end of the programme based on this work.

For project / Dissertation as well as other training, tour and practical reports, the layout should be as below:

Font: Times New Roman

Size: 12

Line Spacing: 1.5

Margin: Left - 1.25; Right-1; Top-1; Bottom-1

All reports should be typed and bound and submitted for evaluation.

SEMESTER 6: THM 6.2: TOUR PACKAGING AND ITINERARY PLANNING

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarise with tour packaging and itinerary in tour operations

UNIT - I

Meaning, definition, origin, development, types, components and significance of tour packages with relation to tourists, destinations and tour companies role and input of public and private sector tourism organizations in promotion of tour packaging business

UNIT - II

Tour Formulation- Influencing factors, stages involved in tour formulation- initial research (Destination and Market).

UNIT - III

Itinerary development- negotiations, confidential tariff, costing and pricing, market strategies, brochure designing, printing and distribution; Itinerary preparation for domestic and international tourist

UNIT - IV

Defining the concept of tour cost, components of tour cost- Fixed and Variable, direct and indirect cost, factors affecting tour cost, Tour Cost Sheet- Meaning and significance, costing, procedures for FIT, GIT and conference and convention packages, calculation of tour pricing, pricing strategies

UNIT - V

Tourist activities based on Mountains, Rivers, Forest and Wildlife and cultural and pilgrimage-Prepare package based on these

Books Recommended:

- P C Sinha; International encyclopedia of tourism management
- Syratt Gwenda manual of travel, travel agency practice Butterworth Heinmann London 1995
- Stevens Laurence Guide to starting and operating successful Travel agency , Delmar publishers Inc New York 1990
- Gee chuck and Y makens ,professional travel agency management Prentice Hall , New York 1990
- Mohinder chand, Travel agency management an introductory text Anmol publications Pvt Ltd New Delhi 2007
- Foster D L the business of Travel agency Operations and administration , McGraw Hill Singapore 1990

SEMESTER 6: THM 6.3: SALES AND ADVERTISING IN TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To make the students understand the importance of advertising and sales

management

Unit - I

Introduction to sales management; sales strategy; selling in tourism; Personal selling; Importance, Role and qualities of sales persons, organizing sales department; Recruiting and Training Sales Force

Unit - II

Sales process; Significance, theories (AIDAS, Buying formula theory); process of personal selling; selling skills; Types of sales presentation, planning the presentation strategy, presentation skills; sales display; Objectives; principles of display, types of display; managing sales promotion; managing consumer promotion, types of consumer promotion, managing sales force promotion.

Unit - III

Advertisement: Meaning, History of Advertising, types, uses and abuses of advertising, advertising methodology, strategy & approach to advertising campaigns, sales support strategies: brouchers, folders, display materials, newsletters, printed publicity material; Advertisement design and development; Advertisement design and marketing objectives, advertisement presentation, creating print and electronic media.

Unit - IV

Media selection, planning and scheduling; Media planning process, media selection process, media scheduling, International media strategy; Measuring advertisement effectiveness; Concept, types of advertising evaluation; advertising budget and advertising agencies; Setting up of advertising budget, methods of budgeting; concept of advertising agencies, functions of advertising agencies.

Books Recommended:

- Anderson B Robert, Professional Sales Management, Prentice Hall Inc.
- George E Belch & Michael A Belch. Advertising and Promotion: An Integrated Marketing Communication. Perspective Irwin/ Macgraw Hill Inc.
- John A Quelch, Sales Promotion Management, Prentice Hall International. London
- Hebert Zenner. Guide to Media Management. Lincolwood, NTC Business Books.
- Smith F Roger- Sales Management-A Practitioner's guide, Van HarenPublishing
- Sharma, Sangeeta & Singh Raghuvir, Advertising: Planning and Implementation, Prentice Hall of India.

SEMESTER 6: THM 6.4: E - TOURISM

No. of Credits : 6

No. of instructional Hours : 6 Hours per week

Course Objectives: To familiarise students with E-Tourism

Unit - I

Introduction to E-Tourism- Historical development- Electronic technologies' for data processing and communication- Hardware and Software-Strategic, Tactical and operational use of IT in Tourism.

Unit - II

E-Commerce-Starting an e-business; E-marketing of tourism products; Typologies of E-tourism- Business models in the wired economy, B2B, B2C.OTA

Unit - III

CRS: its functions; CRS for Rail Transport, Hotel Bookings; Airlines

Unit - IV

MIS: Organizational Theory and Systems Approach to MIS. Conceptual Design phase of MIS, Detail design of MIS; Implementation phase; Quality Assurance and Control; Management Knowledge System

Unit - V

Social Networking: Meaning, Importance and its impacts on Tourism Business; Current debates in E-Tourism; Future of E-Tourism.

Books Recommended:

- Lucas Jr.. H.C. (2005) Information Technology for Management, McGraw Hill.
- Burch J and Grudnitski G (1989). Information Systems: Theory and Practice. 5th ed. John Wiley, New York.
- David V (1992). 'Foundations of Business Systems, Dryden Press, Fort Worth.
- Estrada S (1993), Connecting to the Internet, O'Reilly, Sebastopol C.



ডিগবৈ মহাবিদ্যালয় DIGBOI COLLEGE

Phone & Fax-(03751) 264416 Email- digboicollege@yahoo.com Website- www.digboicollege.edu.in www.digboicollege.com

P. O. DIGBOI - 786171 (ASSAM)

OFFICE OF THE PRINCIPAL::DIGBOI COLLEGE:: DIGBOI

Memo No:Dig/Col/GB/2021/15

Date: 24.12.2021

Resolution of GB Meeting held on 24th December 2021

Resolution No. 4:

"......Resolved that the introduction of (i) Certificate Course on "Yoga" offered by Digboi College Yoga –Meditation Center, (ii) Add-on Course on "Mushroom Farming" (offered by Department of Botany, Digboi College (iii) Add-on Course on "Advanced Computational Methods" (offered by Department of Physics, Digboi College), with 30 or more contact hours giving effective from the academic session 2021-2022 be approved"

Principal
Digboi College
Principal
DIGBOI COLLEGE



ডিগবৈ মহাবিদ্যালয় DIGBOI COLLEGE

Phone & Fax-(03751) 264416 Email- digboicollege@yahoo.com Websile- www.digboicollege.edu.in www.digboicollege.com

P. O. DIGBOI - 786171 (ASSAM)

OFFICE OF THE PRINCIPAL::DIGBOI COLLEGE:: DIGBOI

Memo No:Dig/Col/AB (UG)/2021/15

Date: 06.11.2021

NOTIFICATION

The Meeting of the Academic Board, Digboi College held on 05/11/2021 vide Resolution No1 has approved the draft of the Syllabi for the following Add on /Certificate Course with 30 or more contact hours offered by various Department/ Center of the college giving effective from the academic session 2021-2022.

Sl. No.	Name of the Course	Name of the Department / Centre offering the Course	Name Course Coordinator	Name of the faculty participation in the design and development of the Course
(1)	Certificate Course	Digboi College Yoga-Meditation	Baby Ritu Phukan, Associate Professor,	Baby Ritu Phukan, Associate Professor,
(1)	"Yoga"	Center	Dept. of English	Dept. of English
(2)	Add-On Course on "Mushroom Farming"	Department of Botany	Dr. Dimpy Das, Assistant Professor, Dept. of Botany	Dr. Dimpy Das, Assistant Professor, Dept. of Botany
(3)	Add-On Course on "Advanced Computational Methods"	Department of Physics	Sanat Kumar Gogoi, Assistant Professor, Dept of Physics	Sanat Kumar Gogoi, Assistant Professor, Dept of Physics

The Syllabi of the above Add on /Certificate Course are given with this Notification as Enclosure Issued with due approval.

Principal
Digboi College
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DIGBOI COLLEGE



Digboi College Yoga-Meditation Center Digboi College, College

<u>"Certificate Course in Yoga" (CCY)</u>

Title of the Practice:

The programme has been named "Certificate Course in Yoga" (CCY) under 'Digboi College Yoga- Meditation Centre'

Objectives of the Practice:

- To help students to understand the types of Yoga and impart the practical knowledge of Yogasana, Kriyas, Bandhas, Mudras, Yogic Therapy and Pranayama
- To introduce basic wellness principles and practices of Yoga to students
- To create awareness among students about the benefits of regular practice of yoga
- To enable them to sustain physical, social and spiritual health.
- To bring peace and harmony in the society at large by introducing the Yogic way of life.
- The end goal is the implementation of the philosophy of Yoga in everyday life.

The context in respect of Yoga:

The present pandemic situation due to corona virus has posed enormous challenges on the physical and mental wellbeing of people worldwide. The uncertainty lurking around us has given rise to stress, anxiety and depression in us, thus compelling us to look for new ways to keep ourselves physically and mentally fit. Yoga has been recognised as a powerful tool to deal with the uncertainty and isolation, as well as to maintain physical well-being. Yoga is serving as a panacea for all the ills afflicting us.

The Practice of Yoga:

When practiced well, yoga is sure to bring about peace, calmness, and tranquillity in us. It can give us the strength to see the world and the people in the right perspective with a sense of equanimity.

Duration:

The minimum duration of the programme will be one month (30 hours) / 3 months (72 hours)

Eligibility:

The candidate should be a bona fide student of Digboi College.

Course Coordinator:

Baby Ritu Phukan, Associate Professor, Department of English

Principal DIGBOI COLLEGE



Digboi College Yoga-Meditation Center Digboi College, College

Syllabus on "Certificate Course in Yoga" (CCY)

Paper – I (Theory) Marks - 30

Unit -1

- 1. Hathayoga: Its Origin, Meaning, Definition, Aims and Objects, Importance in Modern era.
- 2. Sign and symptoms of success in Hatha Yoga.
- 3. Contribution of Nath Tradition in Hathayoga.
- 4. Mitahara, Pathya and Apathya, do and don't in Hathayoga Sadhna.

<u>Unit -2</u>

- 1. **Dhauti**: Its techniques, benefits, precautions, contraindications and classification, Practices of Dhauti: Danda Dhauti, Baman Dhauti, Agnishar Dhouti.
- 2. Basti, Neti ,Nauli: Its techniques ,benefits,precautions,contraindication and classification
- 3. Trataka, Kapalbhati: Its techniques , benefits, precautions, contraindications and classification.
- 4. Asanas: Meaning and definition, principles, their techniques ,benefits, precautions, contraindications and classification.

Unit-3

- 1. Pranayama: Its Meaning and Definition, Prana and its types.
- 2. Principles, classification of Pranayama according to Hathayogic texts.
- 3. **Pranayama**: Their techniques, benefits, precautions, contraindications and classification according to Hathayogapradeepika and Gheranda samhita.
- 4. **Mudras** (Bandha): Meaning and Definition, Mudras mentioned in Gherandasamhita and Hathayogapradeepika.
- 5. Nadi's: Meaning, Origin, Location, types, classification and its importance in Hathayoga Sadhna.

Principal Pige



Digboi College Yoga-Meditation Center Digboi College, College

Paper – II (Practical) Marks – 70

Practical Demonstration of Asana, Pranayam and Shudhikriyas

Marks: 100 (Theory: 30 marks + Practical: 70 marks)

LIST OF YOGIC PRACTICES:

ASANA	PRANAYAMA	<u>KRIYA</u>
1. Shirsha Asana	1. Anulom Vilom	1. Basti
2. Vipratakarani	2. Bhrastika	2. Dhouti
3. Hala Asana	3. Shitali	3. Neti
4. Bhujanga Asana	4. Shitkari	4. Nouli
5. Ardh-Shalbha Asana	5. Bhramari	5. Trataka
6. Vakra Asana	Chandra Bheda	6. Kapala Bhati
7. Ardha Matasyaendrasana	7. Surya Bheda	
8. Paschimottana Asana		
9. Vajra Asana		
10. Supta Vajra Asana		
11. Yoga Mudra		
12. Nauka Asana		
13. Baka Asana	8	
14. Mayura Asana		
15. Ustra Asana		
16. Vriksha Asana		
17. Padma Asana		
18. Trikona Asana		
Sarvanga Asana		
Manduka Asana		
Pavan Mukta Asana		
22. Chakra Asana	30	
23. Pada-hasta Asana		
24. Katichakra Asana		
25. Surya Namaskar		

Bendeau

Baby Ritu Phukan (Course - Coordinator)

Digboi College Yoga-Meditation Center

Principal DIGBOI COLLEGE

<u>Department of Botany: Digboi College</u> Digboi-786171, Assam, India

An Add On Course on Mushroom Farming

Course description:

This Add On course aims at providing technical knowhow of mushroom cultivation and entrepreneurship development among interested youths. The course plan has been designed to meet the theoretical and practical knowledge of mushroom farming and expected that the learner will get enriched with technical knowhow of the mushroom farming.

Course objective:

- 1. To provide technical knowhow of mushroom cultivation.
- 2. Entrepreneurship development among interested youths.

Key highlights:

After completion of this course the learner could be a good mushroom farmer and would be able to develop self sustainable mushroom entrepreneurship.

Eligibility: 10th standard (HSLC Pass)

Duration of course: 75 days (30 hrs)

Course fee: Rs. 300/-

Name of teaching faculty:

Dr. Tilak Ch. Dutta,

Mr. Dulu Moni Das, Assistant Professor, Botany Department, Digboi College

Dr. Dimpy Das, Assistant Professor, Botany Department, Digboi College

Name of Trainer:

Dr. Tilak Ch. Dutta, HOD Botany Department, Digboi College

Course Co-ordinator:

Dr. Dimpy Das, Assistant Professor, Botany Department, Digboi College.



Department of Botany: Digboi College

<u>Digboi-786171, Assam, India</u> Syllabus on

Mushroom Farming

Paper – I (Theory) Marks - 70

Unit I

Introduction: History of mushroom cultivation; biology of mushroom; Types; Nutritional value; Medicinal value; Prospect of mushroom cultivation.

Unit II

Cultivation technology: Infrastructure and requirement; Spawn: types of spawn, mushroom bed preparation and factors affecting mushroom bed preparation; Paddy straw mushroom cultivation; Oyester mushroom cultivation; rearing conditions and sanitation.

Unit III

Harvesting: sanitation during harvesting; process of harvesting; Post harvest processing: Storage; long term and short term storage of mushroom; recipes from mushroom.

Unit IV

Disease and pest management: Pest and pathogens of mushroom; control measures; Integrated Pest Management (IPM).

Unit V

Marketing of mushroom: market demand; market channels; direct marketing and wholesale marketing.

Paper – II (Practical) Marks – 30

- 1. Identification of edible and poisonous mushroom.
- 2. Bed preparation for mushroom cultivation.
- 3. Spawn inoculation, storage of culture and maintenance of cultures.
- Harvesting process.
- 5. Processing of mushroom.

Principal DIGBOI COLLEGE

Department of Botany: Digboi College

Digbol-786171, Assam, India

Reference Book:

- A textbook on mushroom cultivation: Theory and Practice, Aggarwal, A., Sharma, Y.
 P. and Jangra, E., Newrays Publishing House.
- Mushroom Cultivation, Tripathi, D.P. (2005) , Oxford & IBH Publishing Co. Pvt.Ltd., New Delhi.
- Mushroom cultivation technology, Acharya, K., Roy, A. and Sarkar, J., Technoworld, Kolkata.
- Mushroom production and processing thechnology (2010), Pathak Yadav Gour, Agrobios (India).

Dr. Dimpy Das

(Course Co-ordinator)

Vinpy Der

Assistant Professor, Department of Botany

Principal DIGBOI COLLEGE

<u>Digboi-786171, Assam, India</u>

Add-On Course on Advanced Computational Methods

Title of the Course: Add on Course on Advanced Computational Methods

Course Instructors:

- * Dr. Rashmi Patowary, HOD, Assistant Professor, Dept. of Physics, Digboi College.
- * Dr. Kanchan Konwar, Assistant Professor, Dept. of Physics, Digboi College.
- * Dr. Deep Kumar Kuri, Assistant Professor, Dept. of Physics, Digboi College.
- * Sanat Kumar Gogoi, Assistant Professor, Dept. of Physics, Digboi College.

Course Coordinator: Sanat Kumar Gogoi, Asst. Prof., Dept of Physics, Digboi College.

Hosting Department: Department of Physics, Digboi College, Digboi 786171, Assam.

Course Objective:

The objectives of the course are -

- 1. To learn powerful methods, tools, and techniques for solving advanced scientific problems.
- 2. To develop practical computational problem-solving skills.

Course Outcome:

After completion of the course -

- 1. Students will be able to solve scientific problems using different numerical techniques.
- 2. Students will be able to write codes using any of the following languages
 - (a) Python (b) Fortran (c) Scilab (d) C, C++

Description of the course:

This is an advanced course for B.Sc and M.Sc. level students. The course is designed to help the students in solving various scientific problems numerically. This course will improve the ability of the students in handling data-sets, plotting in 2D, 3D and transforming an analytic problem into a numerical one. This course is intended to give a flavour of the numerical problems that one will face in pursuing research oriented education.



<u>Department of Physics: Digboi College</u> <u>Digboi-786171, Assam, India</u>

SYLLABUS Advanced Computational Methods

1. Introduction to computational physics, computer architecture overview, tools of computa- tional physics (3 hours)

What is computational physics? Why do we need it?; Computer hardware: basic computer architecture, hierarchical memory, cache, latency and bandwidth; Moore's law, power bottleneck; Software: compiled (Fortran, C) vs. interpreted languages (MATLAB, python); software management.; Parallelization: MPI; OpenMP.

2. Machine representation, precision and errors (1.5 hours)

Representation on a computer: Integer representation; floating-point representation; Machine precision; Errors: round-off; approximation errors; random errors; errors of the third kind; Quadratic equations; Power series; Delicate numerical expressions; Dangerous subtractions; Preserving small numbers; Partial Fractions; Cubic equations; Sketching functions;

3. Quadrature and Derivatives (6 hours)

Direct fit polynomials; Quadrature methods on equal subintervals; Newton-Cotes formula; Romberg Extrapolation; Gaussian quadrature; Adaptive step size; Special cases;

4. Solutions of linear and non-linear equations (9 hours)

Simultaneous linear equations: Gauss elimination (pivoting, scaling); LU factorization; Calculating inverse; Tri-diagonal systems; Eigenvalues and Eigenvectors: QR Factorization; Gram-Schmidt Orthogonalization; Real roots of single variable function; Relaxation method; qualitative behavior of the function; Closed domain methods (bracketing): Bisection; False position method; Open domain methods: Newton-Raphson, Secant method; Complications; Roots of polynomials; Roots of non-linear equations;

5. Fourier methods (3 hours)

Fast Fourier transform; Convolution; Correlation; Power spectrum;

6. Random numbers and Monte-Carlo (6 hours)

Random number generators; Monte-Carlo integration; Non-uniform distribution; Random Walk; Metropolis algorithm;

7. Ordinary differential equations (9 hours)

Initial value problems: First order Euler method; Second order single point methods; Runge-Kutta methods; Multipoint methods; Boundary value problems: Shooting method; equilibrium boundary value method.

Sanat Kumar Gogoi.

(Course Coordinator)
Asst. Prof., Dept of Physics

Principal DIGBOLCOLLEGE

DEPARTMENT OF COMPUTER SCIENCE DIGBOI COLLEGE, DIGBOI

To.

The Principal

Digboi College, Digboi

Sub: Certificate Course on Computer Application (CCA)

Sir.

With due respect, the faculty members of the Department of Computer Science would like to request you to permit us to introduce a certificate course on Computer Application (CCA) from the session 2016 onwards.

Therefore, we request you to do the needful so that we can start the course from the current session.

The details of the course is attached herewith for your convenience.

With regards,

Joseph on Stranger Christians of Marine Stranger of the Marine of the Charles of

Yours faithfully

(Prasanta Prasad Singha)

Department of Computer Science

Pigboi College, Digboi

DEPARTMENT OF COMPUTER SCIENCE

DIGBOI COLLEGE, DIGBOI

Certificate Course on Computer Application (CCA)

Dighoi College, Dighoi

DETAILS OF THE COURSE

1. Name of the Certificate Course: Certificate Course in Computer Application (CCA)

2. Course Objectives: The Certificate Course in Computer Application (CCA) has the following objective -

a) This Course aims at improving the skill set of the students

b) To enhance the students employability credentials in the market

3. Department involved: Department of Computer Science

4. **Duration of Course**: 30 Contact hours

5. Total marks: 100 6. Eligibility: HS Pass

7. Name of Course Coordinators (Joint): a) Mr. Prasanta Prasad Singha

Assistant Professor, Department of Computer Science Digboi College

b) Mr. Poban Kamar, Assistant Professor, Department of Computer Science Digboi College

8. Course teachers: a) Mr. Prasanta Prasad Singha

Assistant Professor Department of Computer Science Digboi College

&

b) Mr. Poban Kamar, Assistant Professor, Department of Computer Science Digboi College

9. Total Seat: 100

(Prasanta Prasad Singha)

HoD of Computer Science Department of Computer Science Digboi College, Digboi



DIGBOI COLLEGE, DIGBOI

Syllabus
Certificate Course on Computer Application (CCA)
Duration: 3 months

Contact Hours: 30 Marks: 100

UNIT 1:

Introduction to Computer: Introduction to Computer, Classification, Generations, Organization, Capabilities, characteristics & Limitations. Application of computer, components of computers – Hardware: Hardware elements – input, storage, processing & output devices.

UNIT 2:

MS Word: Starting MS-Word- Creating and operating, Saving a document, Editing Text, Formatting documents- Line spacing, paragraph Spacing, Setting tabs, Indenting text, Aligning text, Inserting Header and footers, Bulleting, Page Numbering, spell check and grammar tools, paragraph setting, Page set up, Saving document with password, Printing a document

UNIT 3:

MS Excel: Introducing starting MS - EXCEL, Opening of Worksheet, Saving a Worksheet, formatting work sheet, sorting, Editing Worksheet: Deleting, cells, Rows, Columns, Inserting cells, Rows and columns, charts: Creating, Editing, Inserting, Deleting, Saving, Printing a Worksheet. Protecting Worksheet

UNIT 4:

MS Power Point: Creating, Browsing & saving Presentation. Linking multiple slides, slide layouts, Adding notes to the slides, Editing & formatting slides Editing text: Viewing a presentation in different view, Adding and deleting slides. Selecting text, Inserting and Deleting Text, Moving and copying text Changing text Case spell Checking. Formatting Text: Changing text Attribute Styles. Changing Bullet, Characteristic aligning, Line setting, Paragraph Setting, Changing slide color scheme

Books Recommended:

- PC Software, R. K. Taxali, Tata MacGraw Hill Publishing Company.
- Working with Personal Computer Software (2nd Ed.)- R. P. Soini, Harshal Arolkar, Sonal Jain, WileyIndia Publications.
- Lucas Jr., H.C. (2005) Information Technology For Management, Tata MacGraw Hill Publishing Company.

Principal
Digboi College, Digboi



DEPARTMENT OF EDUCATION DIGBOI COLLEGE, DIGBOI

To

The Principal

Digboi College, Digboi

Sub: Certificate Course on Fundamentals of Elementary Level Teaching (FELT)

Sir.

With due respect, the faculty members of the Department of Education would like to request you to permit us to introduce a certificate course on Fundamentals of Elementary Level Teaching (FELT) from the session 2016-17 onwards.

Therefore, we request you to do the needful so that we can start the course from the current session.

The details of the course is attached herewith for your convenience.

Ment of the state Yours faithfully Poban Gogoi HoD of Education
Digboi College, Digboi

DEPARTMENT OF EDUCATION

DIGBOI COLLEGE, DIGBOI

Certificate Course on Fundamentals of Elementary Level Teaching (FELT)

DETAILS OF THE COURSE

- 1. Name of the Certificate Course: Fundamentals of Elementary Level Teaching (FELT)
- Course Objectives: The Certificate Course on Fundamentals of Elementary Level Teaching (FELT) has the following objective –
 - a) To motivate the learners for teaching profession
 - b) To orient the learners for teaching profession at elementary level
- 3. Department involved: Department of Education
- 4. Duration of Course: 30 Contact hours
- 5. Total marks: 80
- 6. Eligibility: HS Pass
- 7. Name of Course Coordinators (Joint): a) Mr. Poban Gogoi, Assistant Professor,

Department of Education, Digboi College &

b) Mr. Pradip Dutta, Assistant Professor,

51/04/2016

Department of Education, Digboi College

8. Course teachers: a) Mr. Poban Gogoi, Assistant Professor,

Department of Education, Digboi College

- b) Mr. Pradip Dutta, Assistant Professor,
 Department of Education, Digboi College &
- Miss. Sneha Gogoi, Assistant Professor, Department of Education, Digboi College,

9. Total Seat: 80

Poban Gogoi

HoD of Education Department of Education Digboi College, Digboi

Approved held of Poban HoD of Department Digboi Co

DIGBOI COLLEGE, DIGBOI COURSE: FOUNDAMENTALS OF ELEMENTATRY LEVEL TECHING (FELT)

COURSE CODE: FELT TOTAL MARKS: 80 CONTACT HOURS: 30

20

Unit -1: Concept and nature of elementary education in India 1.1 Constitutional provisions of elementary education in India 1.2 Central and state sponsored schemes for the development of elementary education in Assam 1.3 Problems and measures of elementary education in Assam. 20 Unit - II: Lesson plan and audio-visual aids 2.1. Concept and types of lesson plan 2.2. Characteristics of good lesson plan 2.3. Micro and macro lesson plan 2.4. Meaning, nature and types of audio-visual aids 2.5. Importance of audio-visual aids in elementary education Unit - III: Teaching-learning process 20 3.1. Concept and nature of teaching-learning process 3.2. Maxims of teaching 3.3. Marks of good teaching 3.4 Methods and techniques of teaching at elementary level Unit - IV: Practice and internship in teaching (Practical) 20 4.1 Preparation of teaching-learning materials 4.2 Question paper setting 4.3 Micro teaching (Skills: Introducing a lesson, Blackboard writing, Questioning, Explaining, and Achieving closure) 4.4 Practice teaching.

- A) Internal assessment marks is 20 which will be based on two sessional examinations.
- B) Unit IV is practical based. The learners need to prepare 5 Teaching-Learning Materials (5 marks), 1 Question Paper (5 marks), Practice of 5 teaching skills (5 marks) and practice teaching of 10 classes at nearby school (5 marks).

Principal
Dighol College, Dighel

31/1/2016





IQAC DIGBOI COLLEGE PRESENTS UNDER RUSA FINISHING SCHOOL EQUITY INITIATIVE SCHEME

ONLINE ADD ON PROGRAM FOR 2^{ND} , 4^{TH} & 6^{TH} SEMESTER B.A., B.SC.& B.COM. STUDENTS

Aptitude & Soft skills

A complete course on recruitment

Duration: 42 Hours Live Class

3rd June 2021-21st July 2021(Except Sunday) **Date/Day:**

Time (Every Day): 5.30PM-6.30PM

Resource Person:

Anand Kulkarni

An IIT-K, IIM-I and university of Pittsburgh USA alumnus offering 15 years of enormous teaching experience in the area of Aptitude and Soft skill training and associated with ITC, Maruti Suzuki, ICICI and IMS in various capacities (Regional head, Investment banker, General Manager - HR etc)

Digboi College, Digbol



ONLINE ADD ON PROGRAM

FOR 2ND, 4TH & 6TH SEMESTER B.A., B.SC.& B.COM. STUDENTS

Aptitude & Soft skills

A complete course on recruitment

Course Curriculum

Online Platform: Unacademy Login Process:

Step 1: Registration

Step 2: Live class link (Will be sent every day)
Step 3: Invitation code (Will be sent every day)

Phase -I ONLINE ADD ON PROGRAM ON APTITUDE & SOFT SKILLS				
Verbal	Current Affairs	Soft skills	Theory	
One word substitution-1	Companies and Logos	Introduction to interview	Crypto currency	
One word substitution-2	Start ups	Do's and Don'ts	Arteficial intelligence	
One word substitution-3	Brand ambassadors	Types of personal interview	Isreal Palestine	
One word substitution-4	Parent company and brand	Importance of body language	Electric vehicles in India	

Phase -II					
ONLINE	ONLINE ADD ON PROGRAM ON APTITUDE & SOFT SKILLS				
Verbal	Current Affairs	Soft skills	Theory		
Jumbled sentence-1	Sports 2020-2021	Resume -1	Net Zero		
Jumbled sentence-2	Movies 2020-2021	Resume -2	Biomedical waste crisis		
Jumbled sentence-3	Share market terms	Resume-3	Post-Covid world		
Idioms and Phrases -1	Banking terms	Resume-4	Impact of COVID-19 on Indian economy		
Idioms and Phrases -2	Indian history	Covering Letter	India's COVID-19 vaccination program		
Idioms and Phrases -3	Famous personalities	Curriculum vitae	Union Budget 2021-22		

Principal Digboi College, Digboi



Phase -III				
ONLINE ADD ON PROGRAM ON APTITUDE & SOFT SKILLS				
Verbal	Current Affairs	Soft skills	Theory	
Synonyms-1	Highest longest largest shortest and tallest	Statement of purpose	The Future of Artificial Intelligence	
Synonyms-2	First Indian Women	Letter of recommendation	Quad	
Synonums-3	India at a glance	Group discussion-1	The rise of the Gig economy	
Antonyms-1	Indian States and Capitals	Group discussion-2	Is the United Nations still relevant?	
Antonyms-2	Indian States and their Symbols	Group discussion-3	Farm Bills 2020 – Pros, Cons & Challenges	
Antonyms-3	Indian States and Territories	Group discussion-4	National Recruitment Agency – Pros & Challenges	

Phase -IV				
ONLINE ADD ON PROGRAM ON APTITUDE & SOFT SKILLS				
Verbal	Current Affairs	Soft skills	Theory	
Cloze test -1	Indian Cabinet Ministry	Written ability test-1	Atmanirbhar Bharat Abhiyan	
Cloze test -2	First in India	Written ability test-2	Open book exams – Pros, Cons & Challenges	
Cloze test- 3	Highest longest largest shortest and tallest	Written ability test-3	National Health ID – Pros, Cons & Challenges	
Active and passive voice	First Indian Women	Extempore-1	How to revive Indian economy?	
Direct indirect speech	Indian History GK	Extempore-1	E-learning – Pros & Challenges	
Degrees of comparison	Great Personalities	Business plan	Private trains in India – Benefits & Challenges	

Phase -V				
ONLINE	ONLINE ADD ON PROGRAM ON APTITUDE & SOFT SKILLS			
Verbal	Current Affairs	Soft skills	Theory	
Articles	Nick Name of Indians	Linked in profile	Ban on Chinese Apps in India	
Adjective	India's Only	Social media	Can India become a \$5	
	Achiever	branding	trillion economy by 2024?	
Preposition	Compilation of all	Portfolio profile	Bifurcation of Jammu & Kashmir	



DEPARMENT OF ELECTRONICS DIGBOI COLLEGE: DIGBOI

To The Principal Digboi College, Digboi

Date: 18.1.2021

Sub: Add-on course in Manufacturing and Repairing of LED Bulb

Sir.

With due respect, the faculty members of Department of Electronics of Digboi College would like to request you to permit us to introduce an Add-on course in Manufacturing and Repairing of LED Bulb from the session- 2020-21

Therefore, we request you to do the needful so that we can start from the current session.

The details of the course along with syllabus are attached herewith for your kind consideration and approval.

With regards,

Yours' faithfully,

Dr. Jayanta Handique

&

Nabadweep Chan

Dr. Nabadweep Chamuah Department of Electronics

Digboi College

ADD-ON COURSE ON MANUFACTURING AND REPAIRING OF LED BULB Session 2020-21

Offered by: Digboi College, Digboi

OBJECTIVE OF THE COURSE

- 1. To understand the basics of power electronics and its usages inlighting controls, or LEDpower supplies and LED drivers.
- 2. To know about Special safety and handling precautions to be taken during LED luminarytesting.
- 3. Identify dysfunctional components through visual inspection and by useof multimeter
- 4. To understand, various electronic & electrical components, materials and their specific properties & usages.

SYLLABUS

Unit1: Basic Electronics: Identification of circuit components, Understanding the electrical properties of different components, Understand the functionality of coil, winding of coil, diode and its uses, Transistor, Biasing of transistor, Current amplification circuit, Designing of filter. Understand the functionality of multimeter, Explain different modes of testing in multimeter, Handling of regulated power supply, Precautious dealing with AC & DC current.

Unit 2: SMT machine, reflow oven, Soldering of semiconductor devices, Manual screen printer, Soldering Iron, Soldering and Desoldering, AC to DC regulated power supply, AC to AC regulated power supply, LED Driver Tester.

Unit 3: Principal of illumination from a LED, properties of LED, identifying the reason of LED malfunctioning, various blocks of a LED, Analyzing the fault by approaching each block, Selection of alternate spare in case of unavailability of components. PCB Design.

EVALUATION PROCESS:

- 1. Written Examination
- 2. Practical and Viva voce
- 3. Attendance.

At the end of the course a certificate will be provided to the students depending upon their performance in the evaluation process. Course Coordinator determines the grading of the students based on the evaluation process. The gradation in the certificate ranges from 'O' (for outstanding) to 'F' (unsatisfactory) in 10 points grading system.

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