

ST. JOSEPH'S COLLEGE

JAKHAMA

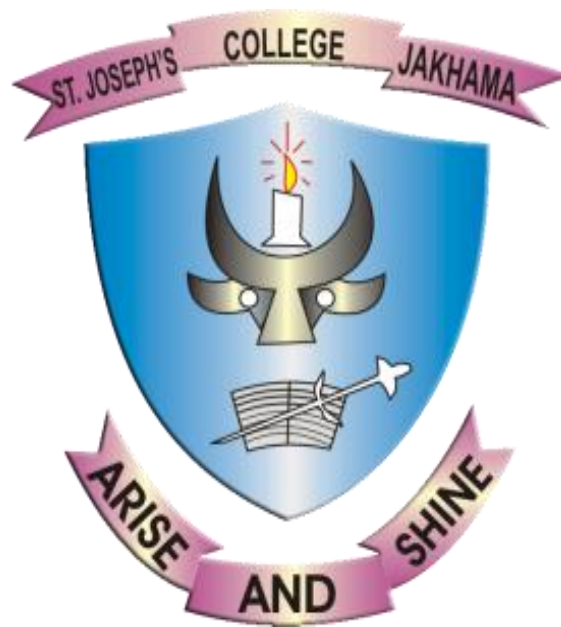
(Autonomous status granted by UGC notification No.F.22-1/2017 (AC)
Dtd.11th Oct. 2018)

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NAAC Grade A (CGPA: 3.12)



Syllabi

Under Graduate and Post Graduate Programmes

Under Choice Based Credit System

Sl. No	Programmes having Field Projects/ Research Project/ Internship
1.	BBA : Summer Internship (BAS 6.3)
2.	B.Com: Business Research Methods and Project Work (COD 6.4)
3.	B. Sc Botany: Plant Breeding (BTD 5.3)
4.	B. Sc Botany: Herbal Technology (BTS 3.4)
5.	B. Sc Chemistry: Project/ Dissertation (CHD 6.4)
6.	B.A Education: Educational Planning, Administration and Management (EDC 1.2)
7.	B.A Education: Education and Society (EDC 2.1)
8.	B.A Education: Special Education- II (EDD 6.4)
9.	B.A Sociology: Sociological Research Method II (SOC 5.2)
10.	B. Sc Zoology: Principles of Ecology (ZOC 1.2)
11.	B. Sc Zoology: Fish and Fisheries (ZOD 5.4)
12.	M.A Economics: Dissertation (MECC 4.1)
13.	M.A Sociology: Project Work (MSOC 4.4C)
14.	B.A English: Environmental Studies(ESA 2.3)
15.	B.A Economics: Environmental Studies(ESA 2.3)
16.	B.A Education: Environmental Studies(ESA 2.3)
17.	B.A History: Environmental Studies(ESA 2.3)
18.	B.A Political Science: Environmental Studies(ESA 2.3)
19.	B.A Sociology: Environmental Studies(ESA 2.3)
20.	B.Sc. Botany: Environmental Studies(ESA 2.3))
21.	B. Sc Chemistry : Environmental Studies(ESA 2.3)
22.	B. Sc Mathematics: Environmental Studies(ESA 2.3)
23.	B. Sc Physics: Environmental Studies(ESA 2.3)
24.	B. Sc Zoology: Environmental Studies(ESA 2.3)
25.	BBA : Environmental Studies (BAA 2.3)
26.	B.Com: Environmental Studies(ESA 2.3)

Bachelor of Business Administration
SUMMER INTERNSHIP

Paper Code: BBA-603

Credit Points: 2

Objective: *The objective of doing the Summer Internship is to inculcate the students the ability to apply their theoretical knowledge and skills developed during the course of the study and apply it in the field. They have to collect data and prepare a report of their findings on some topics suggested to them or chosen by themselves in consultation with the faculty guide. This will teach them the methodology of collecting information and of preparing written work along with understanding the importance and value of field work.*

A student will submit report of Summer Internship of six to eight weeks which will be internally evaluated

Marks Assigned:

- 1. Project Report: 50 Marks**
- 2. Presentation: 25 Marks**
- 3. Comprehensive Viva-Voce: 25 Marks**

Bachelor of Commerce

BUSINESS RESEARCH METHODS AND PROJECT WORK (COD-6.4)

Credits: 6 Credits

Marks: 100

Objective: This course aims at providing the general understanding of business research and the methods of business research. The course will impart learning about how to collect, analyze, present and interpret data.

Section A: Business Research Methods 50 Marks

Unit 1: Introduction

10 Lectures

Meaning of research; Scope of Business Research; Purpose of Research – Exploration, Description, Explanation; Unit of Analysis – Individual, Organization, Groups, and Data Series; Conception, Construct, Attributes, Variables, and Hypotheses

Unit 2: Research Process

10 Lectures

An Overview; Problem Identification and Definition; Selection of Basic Research Methods- Field Study, Laboratory Study, Survey Method, Observational Method, Existing Data Based Research, Longitudinal Studies, Panel Studies

Unit 3: Measurement and Hypothesis Testing

19 Lectures

Measurement: Definition; Designing and writing items; Uni-dimensional and Multi-dimensional scales; Measurement Scales- Nominal, Ordinal, Interval, Ratio; Ratings and Ranking Scale, Thurstone, Likert and Semantic Differential scaling, Paired Comparison; Sampling –Steps, Types, Sample Size Decision; Secondary data sources

Hypothesis Testing: Tests concerning means and proportions; ANOVA, Chi-square test and other Non-parametric tests Testing the assumptions of Classical Normal Linear Regression

Section B: Project Report Marks 50

Unit 4: Report Preparation 26 Lectures

Meaning, types and layout of research report; Steps in report writing; Citations, Bibliography and Annexure in report; JEL Classification

Note:

1. There shall be a written examination of 50% Marks on the basis of Unit 1: to III.
2. The student will write a project report under the supervision of a faculty member assigned by the college/institution based on field work. The Project Report carries 50% Marks and will be evaluated by University appointed examiners.

Bachelor of Science: Botany Honours

PLANT BREEDING (BTD 5.3)

(Credits: Theory-4, Practical-2)

Lectures: 60

Unit 1: Plant Breeding (10 lectures)

Introduction and objectives. Breeding systems: modes of reproduction in crop plants. Important achievements and undesirable consequences of plant breeding.

Unit 2: Methods of crop improvement (20 lectures)

Introduction: Centres of origin and domestication of crop plants, plant genetic resources; Acclimatization; Selection methods: For self pollinated, cross pollinated and vegetatively propagated plants; Hybridization: For self, cross and vegetatively propagated plants – Procedure, advantages and limitations.

Unit 3: Quantitative inheritance (10 lectures)

Concept, mechanism, examples of inheritance of Kernel colour in wheat, kernel colour in corn, Monogenic vs polygenic Inheritance.

Unit 4: Inbreeding depression and heterosis (10 lectures)

History, genetic basis of inbreeding, depression and heterosis: Applications.

Unit 5: Crop improvement and breeding (10 lectures)

Role of mutations; Polyploidy; Distant hybridization and role of biotechnology in crop Improvement

Practical: Students will have to conduct study on the different species and submit a report of the same.

Suggested Readings

1. Singh, B.D. (2005). Plant Breeding: Principles and Methods. Kalyani Publishers. 7th edition.
2. Chaudhari, H.K. (1984). Elementary Principles of Plant Breeding. Oxford – IBH. 2nd edition.
3. Acquaah, G. (2007). Principles of Plant Genetics & Breeding. Blackwell Publishing.

Bachelor of Science: Botany Honours

Skill Enhancement Course: HERBAL TECHNOLOGY (BTS 3.4)

Credits: 2

Lectures: 30

Unit 1: Herbal medicines: history and scope - definition of medical terms - role of medicinal plants in Siddha systems of medicine; cultivation - harvesting - processing - storage - marketing and utilization of medicinal plants. **(6 Lectures)**

Unit 2: Pharmacognosy - systematic position medicinal uses of the following plants in curing various ailments; Tulsi, Ginger, Fenugreek, Indian Goose berry and Ashoka. **(6 Lectures)**

Unit 3: Phytochemistry - active principles and methods of their testing - identification and utilization of the medicinal herbs; *Catharanthus roseus*(cardiotonic), *Withania somnifera* (drugs acting on nervous system), *Clerodendron phlomoides*(anti-rheumatic) and *Centella Asiatica* (memory booster) **(6 Lectures)**

Unit 4: Analytical pharmacognosy: Drug adulteration - types, methods of drug evaluation - Biological testing of herbal drugs - Phytochemical screening tests for secondary metabolites (alkaloids, flavonoids, steroids, triterpenoids, phenolic compounds) **(8 Lectures)**

Unit 5: Medicinal plant banks micro propagation of important species (*Withania somnifera*, neem and tulsi- Herbal foods-future of pharmacognosy) **(4 Lectures)**

Suggested Readings

1. Glossary of Indian medicinal plants, R.N.Chopra, S.L.Nayar and I.C.Chopra, 1956. C.S.I.R, New Delhi.
2. The indigenous drugs of India, Kanny, Lall, Dey and Raj Bahadur, 1984. International Book _Distributors.
3. Herbal plants and Drugs Agnes Arber, 1999. Mangal Deep Publications.
4. Ayurvedic drugs and their plant source. V.V. Sivarajan and Balachandran Indra 1994. Oxford IBH _publishing Co.
5. Ayurveda and Aromatherapy. Miller, Light and Miller, Bryan, 1998. Banarsidass, Delhi.
6. Principles of Ayurveda, Anne Green, 2000. Thomsons, London.
7. Pharmacognosy, Dr.C.K.Kokate et al. 1999. Nirali Prakashan.

Bachelor of Science: Chemistry Honours: Project/ Dissertation

PROJECT/DISSERTATION (CHD 6.4)

Credits: 6

- The student has to choose their guide during their 5th Semester.
- The department will set up committee to finalise the proposed Project/Dissertation.
- There will be viva voce at the end of 6th semester.

Bachelor of Arts: Education Honours

EDUCATIONAL PLANNING, ADMINISTRATION AND MANAGEMENT (EDC1.2)

Credit: 6

Course Objectives: On completion of the course the students shall be able to:

- explain the concept, nature and scope of educational management
- describe the functions of educational management and administration
- list down various types of educational administration
- elaborate the principles of educational management
- elaborate the steps in planning and explain different types of administration
- elaborate functions of state level educational bodies
- describe the sources of financing in education

Unit – 1 Educational Planning

1. Meaning, Nature, Objective and scope
2. Steps in Educational Planning: Diagnosis of Educational Development, Plan formulation, Plan implementation, Monitoring and Evaluation.

Unit – 2 Educational Administration

1. Concept, Objectives and scope of educational administration
2. Basic Functions of Administration: Planning, Organizing, Directing and Controlling.
3. Functions of state level educational bodies: SCERT, BSE & School Education

Unit – 3 Educational Management

1. Meaning, Nature and Scope
2. Types: Centralized and Decentralized, Authoritarian and Democratic
3. Functions of Educational Management

Unit – 4 Economics of Education:

1. Cost in education: the current cost and capital cost of education

2. The direct and indirect cost of education
3. The private cost , social, cost and unit cost of education
4. Educational expenditure as investment
5. Financing of education: a) Agencies of financing education
 - b) Financing of education by parents
 - c) Financing of education by employers

REFERENCES:

1. Bhatnagar, R.P. & Agarwal, V. Educational Administration, Meerut, Loyal Book Depot
2. Kochar, S.K.-(2002) Secondary School Administration, New Delhi Sterling Publishers Pvt.
3. Mishra, P.K. (2008) Rudiments of Guidance and Management in Education, New Delhi, Kalyani Publishers
4. Naik, J.P.-Educational Planning in India.
5. Shukla, C.S. (2008) Essentials Educational Technology and Management, New Delhi, Dhanpat Rai Publishing Co.(P) Ltd
6. Shukla, S.P.-Educational Administration, Agra, Vinod Pustak Mandir
7. Bhatnagar, R.P. & Verma, L.B. (1978). Educational Administration. Meerut, India:
8. Blaug, M. (Ed.), Economics of Education, Vol. 1 & 2, Penguin
9. Deshmukh, A.V. and Naik A.P.(2010). Educational Management. Mumbai:
10. Fadia, B.L. (2010). PublicAdministration. New Delhi: PHI.
11. Himalaya Publishing House. India: Dhanpat Rai & Sons.
12. Kochar, S.K. (2011). School Administration and Management. New Delhi: Sterling
13. Koul, B.N. (Ed.), Economics of Education (Block 1, ES 317), IGNOU, New Delhi, 1993.
14. Rajaiiah, B., Economics of Education, Mittal, New Delhi, 1987. . . .
15. Safaya, R & Saida, B.D. (1964). School Administration and Organisation. Jalandhar,
16. Schultz, T.W., The Economic Value of Education, Columbia University Press, New York, 1963.
17. Singh, B., Economics of Indian Education, Meenakshi Prakashan, New Delhi,, 1983.
18. UNESCO, Readings in the Economics of Education, 1968.
19. Vaizey, J., The Economics of Education, Feber & Feber, 1962.

C -2 Practical: A visit to any Higher-educational institute and prepare a report on Administration.

Distribution of marks: Record: 20 marks

Viva voce: 05 marks

Total = 25 marks

Bachelor of Arts: Education Honours
EDUCATION AND SOCIETY (EDC 2.1)

Credit: 6

Course Objectives: After completion of this paper, students shall be able to:

- Justify education as a social process and explain its function.
- Describe the aims of education from sociological perspective.
- List various agencies of education and their function.
- justify education as a sub-system of society and how other sub-systems affect education
- Appreciate the importance of education for social change.

Unit – 1 Education and society

1. Society : Meaning and characteristics
2. Types of society : Agricultural, Industrial, rural and urban
3. Interrelationship between education and society
4. Social groups: Primary, Secondary - Social interaction and stratification

Unit – 2 Education and culture

1. Meaning and concept of culture
2. Characteristics and types of culture
3. Cultural lag and acculturation
4. Cultural dimensions of Education
5. Inter relationship between education, custom and value system.

Unit – 3 Education, Social process and Institution

1. Education and socialization
2. Education and social change
3. Education and social mobility

Unit – 4 Cultures of Northeast India

1. Cultural Factors of Northeast India with special reference to the Cultures and Traditions of Nagaland

REFERENCES:

1. Abraham, M.F. (2008). Contemporary Sociology. New Delhi: Oxford University Press.
2. Anand, C.L. et.al. (Ed.) (1983). Teacher and Education in Emerging in Indian Society. New Delhi: NCERT

3. Dewey, John (1973). The School and Society. Chicago: University of Chicago Press.
4. Mathur, S.S. (1966). A Sociological Approach to Indian Education.
5. Vinod Pustak Mandir, Agra. Nayak, B.K. Text Book of Foundation of Education. Cuttack: Kitab Mahal.
6. NCERT (1983). Teacher and Education in Emerging Indian Society New Delhi.
7. Ottaway, A.K.C. (1966). Education and Society. London: Routledge and Kegan Paul.

C- 3 Practical: Field Study

Distribution of Marks: Record = 20 Marks

Viva-voce = 05

Total = 25 Marks

Bachelor of Arts: Education Honours

SPECIAL EDUCATIONAL II (EDD 6.4)

Credit: 6

Marks: 100

Course objectives:

- To enable the students to understand the characteristics of physically and mentally challenged children
- To identify the symptoms and problems of delinquents and deprived children.
- Learning how the different educational provisions can help such children.

Course contents:

Unit 1: Differently abled

Differently abled - physical and mental Characteristics of physical, visual, oral and speech impaired children

Unit 2: Mental Retardation

1. Mentally retarded children- meaning and general classification
2. Classification on the basis of I.Q
3. Causes of mental retardation

Unit 3: Education of Deprived Children

1. Education of deprived children- meaning and characteristics
2. Educational provisions for the deprived children
3. Educational provisions for the physically differently abled children

Unit 4: Juvenile Delinquency

1. Juvenile Delinquency: Meaning, Symptoms of Delinquency, Causes and Remedial Measures

Suggested Reading:

1. Mahesh Bhargava – Introduction to Exceptional Children: Their nature and educational provision.
2. Chintamani Kar _ Exceptional Children: Their psychology and education
3. Chauhan SS _ Education of Exceptional Children
4. Gupta P K _ Education for Creativity
5. Farwel M _ Special Education Needs
6. Porter L _ Educating Young Children with Special Needs

Practical

Each student is required to conduct a case study of a special child and write a report

Distribution of Marks:

Record = 20 marks

Viva voce = 05 marks

Total = 25 marks

Bachelor of Arts: Sociology Honours
Sociological Research Method II (SOC 5.2)

Credits: 4

Marks: 100

Objective: The course is an introductory course on how research is actually done. With emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research.

Outline

1: APPROACHES TO RESEARCH

- a. Quantitative
- b. Qualitative
- c. Ethnography

2: METHODS OF RESEARCH

- a. Social Survey
- b. Case Study

3: TYPES OF RESEARCH

- a. Basic and Applied
- b. Historical and Empirical

4: DATA PROCESSING AND ANALYSIS

- a. Methods of Data Processing
- b. Analysis of Data

5: REPORT WRITING

- a. Interpretation of Data
- b. Techniques of Report Writing

❖ The students will have to do a field project as part of their practical learning and submit the report of the same

Essential Readings:

1. Ahuja, ram: 2009; *Research Methods*; Jaipur; Rawat Publication
2. Beteille, A. and T.N. Madan; 1975; *Encounters and Experience: Personal Accounts of Feildwork*; New Delhi; Vikas publishing House.
3. Cauvery, R et.al; 2003; *Research Methodology*; New Delhi; S. Chand and Company Ltd.
4. Dooley, David; 2007; *Social Research Methods (Fourth edition)*; New Delhi; Prentice Hall of India
5. Ghosh, B. N; 1985; *Scientific Methods and Social Research*; New Delhi; Sterling Publishers Pvt. Ltd.
6. Goode, William J. and Paul K. Hatt; 1987; *Methods and Social Research*; London: MC Graw Hill Books Company.
7. Kothari, C.R; 2005; *Research Methodology. Methods and Techniques*; New Delhi; New Age International (P) Limited Publishers.
8. Kumar, Ranjit; 1999; *Research Methodology: A Step by Step Guide for Beginners*; New Delhi; Sage Publication.
9. Misra, R.P; 2001; *Research Methodology: A Hand Book*; New Delhi; Concept Publishing Company.
10. Punch, Keith F; 2005; *Introduction to Social Research: Quantitative and Qualitative Approaches (Second Edition)*; New Delhi; Sage Publications.
11. Young, P.V; 1988; *Scientific Social Surveys and Research*; New Delhi; Prentice Hall of India.

Bachelor of Science: Zoology Honours
PRINCIPLES OF ECOLOGY (ZOC 1.2)

THEORY

Credits 4

Unit 1: Introduction to Ecology

History of ecology, Concept of Species; Autecology and synecology, Levels of organization, Laws of limiting factors, Study of physical factors

Unit 2: Population

Unitary and Modular populations

Unique and group attributes of population: Density, natality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion

Exponential and logistic growth, equation and patterns, r and K strategies

Population regulation - density-dependent and independent factors

Population interactions, Gause's Principle with laboratory and field examples.

Unit 3: Community

12

Community characteristics: species richness, dominance, diversity, abundance, vertical stratification, Ecotone and edge effect; Ecological succession with one example; Theories pertaining to climax community

Unit 4: Ecosystem

14

Types of ecosystems with one example in detail, Food chain: Detritus and grazing food chains, Linear and Y-shaped food chains, Food web, Energy flow through the ecosystem, Ecological pyramids and Ecological efficiencies

Nutrient and biogeochemical cycle with one example of Nitrogen cycle

Human modified ecosystem

Unit 5: Applied Ecology

4

Ecology in Wildlife Conservation and Management

PRINCIPLES OF ECOLOGY

PRACTICALS

(Credits 2)

1. Study of life tables and plotting of survivorship curves of different types from the hypothetical/real data provided
2. Determination of population density in a natural/hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index for the same community
3. Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, turbidity/penetration of light, determination of pH, and Dissolved Oxygen content (Winkler's method), Chemical Oxygen Demand and free CO₂
4. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary

SUGGESTED READINGS

- Colinvaux, P. A. (1993). Ecology. II Edition. Wiley, John and Sons, Inc.
- Krebs, C. J. (2001). Ecology. VI Edition. Benjamin Cummings.
- Odum, E.P., (2008). Fundamentals of Ecology. Indian Edition. Brooks/Cole
- Robert Leo Smith Ecology and field biology Harper and Row publisher
- Ricklefs, R.E., (2000). Ecology. V Edition. Chiron Pres

Bachelor of Science: Zoology Honours
FISH AND FISHERIES (ZOD 5.4)

THEORY

(Credits 4)

UNIT 1: Introduction and Classification:

6

General description of fish; Account of systematic classification of fishes (upto classes); Classification based on feeding habit, habitat and manner of reproduction.

UNIT 2: Morphology and Physiology:

18

Types of fins and their modifications; Locomotion in fishes;
Types of Scales, Use of scales in Classification and determination of age fish;
Gills and gas exchange; Swim Bladder: Types and role in Respiration;
Osmoregulation in Elasmobranchs; Reproductive strategies (special reference to Indian fishes); Electric organs; Parental care; Migration

UNIT 3: Fisheries

12

Inland Fisheries; Marine Fisheries; Environmental factors influencing the seasonal variations in fish catches in the Arabian Sea and the Bay of Bengal;
Fishing crafts and Gears; Depletion of fisheries resources; Application of remote sensing and GIS in fisheries; Fisheries law and regulations

UNIT 4: Aquaculture

Sustainable Aquaculture; Extensive, semi-intensive and intensive culture of fish; Pen and cage culture; Polyculture; Composite fish culture; Induced breeding of fish; Management of finfish hatcheries; Preparation and maintenance of fish aquarium; Preparation of compound diets for fish; Role of water quality in aquaculture; Fish diseases: Bacterial, viral and parasitic; Preservation and processing of harvested fish, Fishery by-products

UNIT 5: Fish in research

4

Transgenic fish, Zebrafish as a model organism in research

FISH AND FISHERIES

PRACTICAL (Credits 2)

1. Morphometric and meristic characters of fishes
2. Study of *Petromyzon*, *Myxine*, *Pristis*, *Chimaera*, *Exocoetus*, *Hippocampus*, *Gambusia*, *Labeo*, *Heteropneustes*, *Anabas*
3. Study of different types of scales (through permanent slides/ photographs).
4. Study of crafts and gears used in Fisheries
5. Water quality criteria for Aquaculture: Assessment of pH, conductivity, Total solids, Total dissolved solids
6. Study of air breathing organs in *Channa*, *Heteropneustes*, *Anabas* and *Clarias*
7. Demonstration of induced breeding in Fishes (video)
8. Demonstration of parental care in fishes (video)
9. Project Report on a visit to any fish farm/ pisciculture unit/Zebrafish rearing Lab.

SUGGESTED READINGS

- Q Bone and R Moore, Biology of Fishes, Talyor and Francis Group, CRC Press, U.K.
- D. H. Evans and J. D. Claiborne, The Physiology of Fishes, Taylor and Francis Group, CRC Press, UK von der Emde, R.J. Mogdans and B.G. Kapoor. The Senses of Fish: Adaptations for the Reception of Natural Stimuli, Springer, Netherlands
- C.B.L. Srivastava, Fish Biology, Narendra Publishing House
- J.R. Norman, A history of Fishes, Hill and Wang Publishers
- S.S. Khanna and H.R. Singh, A text book of Fish Biology and Fisheries, Narendra Publishing House

Ability Enhancement (Compulsory) Course for BA, B. Sc, B. Com and BBA

ESA: ENVIRONMENTAL STUDIES

CONTENTS

Unit I: Introduction to environmental Studies and Ecosystems. (4 lectures)

- 1) Multidisciplinary nature of environmental studies:
- 2) Scope and importance of environmental studies
- 3) What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem; food chain, food webs and ecological succession, ecological pyramid.

Unit 2: Natural Resources: Renewable and non- renewable Resources (7 lectures)

- 1) Land resources and land use change: Land degradation, soil erosion and desertification.
- 2) Deforestation: causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations
- 3) Water: use and over-exploitations of surface and ground water, floods, droughts, conflicts over water (international and inter-state).
- 4) Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs.

Unit 3: Biodiversity and conservation (8 lectures)

- 1) Levels of biological diversity; genetic, species and ecosystem diversity; Bio geographic zones of India, global biodiversity hot spots.
- 2) India as a mega- biodiversity nation: Endangered and endemic species of India.
- 3) Threats to biodiversity: Habitat loss, poaching of wildlife, man –wildlife conflicts; conservation of biodiversity; in-situ and ex-situ conservation of biodiversity.
- 4) Ecosystem and biodiversity services; Ecological, economic, social, ethical, aesthetic and informational value.

Unit 4: Environmental Pollution, Policies and Practices (10 lectures)

- 1) Environmental pollution: types, causes, effects and controls: Air, water, soil and noise pollution.
- 2) Nuclear hazards and human health risks
- 3) Solid waste management: Control measures of urban and industrial waste.
- 4) Climate Change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.
- 5) Environment Laws: Introduction and Concept-Environment Protection Act; Air (Prevention and Control of Pollution) Act: Water (Prevention and Control of Pollution) Act; Wild life Protection Act; Forest Conservation Act.

Unit 5: Human Communities and the Environment (4 lectures)

- 1) Human population growth: Impacts on environment, human health and welfare.
- 2) Resettlement and rehabilitation of project affected persons, case studies.
- 3) Disaster management: floods, earthquake, cyclones and landslides.
- 4) Environmental communication and public awareness.

Field Work and Assignment Internal mark: 30

- 1) Students should submit a report at during the semester based on the field visit to a local polluted site air/water/solid waste.
- 2) Assignments/ Seminar/ class test etc

Suggested Readings:

- 1) Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
- 2) Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
- 3) Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
- 4) Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
- 5) Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
- 6) Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339:
- 7) McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
- 8) McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
- 9) Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.
- 10) Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
- 11) Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
- 12) Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.
- 13) Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
- 14) Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
- 15) Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.

- 16) Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
- 17) Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
- 18) Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
- 19) Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
- 20) World Commission on Environment and Development. 1987. Our Common Future. Oxford University

MECC 4.1

Dissertation

Credit: 4

Marks: 100

Objective: This course aims at providing the general understanding of research methods and learning the practical aspects of research in the field of economics. The course will also impart learning about how to collect, analyze, present and interpret data using statistical tools.

Mark Distribution:

Internal Marks: 30 Marks

External Marks:

Dissertation Writing: 40 Marks

Viva-Voce: 30 Marks

M.A Sociology
MECC 4.4C DISSERTATION

Credit: 4

Marks: 100

Course Description:

The course is meant to introduce students to sociological field research which is very essential in pursuing the discipline. This course will also help the students to juxtapose theory and the real-world situation in the domain of sociology. This will also enhance student's capability while entering into different professions.

The students have to undertake this research project under the guidance of a faculty member. The allotment of supervisor will be done by the department. Initially they have to submit a research proposal on which they intend to carry out their study. The students have to present their proposal in a seminar in the presence of faculty members. After the submission of proposal, the students have to conduct fieldwork during summer and winter breaks. After finishing the fieldwork, they have to write research report under the guidance of their supervisors. Before the final submission of dissertation, students have to present progress report on their work in a seminar. There will be a viva-voce examination involving an external expert and faculty members of the department.


Mark Distribution:

Internal Marks: 30 Marks

External Marks:

Dissertation Writing: 40 Marks

Viva-Voce: 30 Marks


Dr. Fr. George Keduolhou Angami
Principal
Principal
St. Joseph's College (Autonomous)
Jakhama Nagaland

