

NORTH-EASTERN HILL UNIVERSITY
MAWKYNROH:::UMSHING
SHILLONG

No:AC:46-2/Conf/93-2147

Dated Shillong the 7th May, 1993.

To

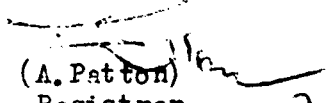
All members of the
Academic Council,
North-Eastern Hill University.

Sir/Madam,

I am forwarding herewith the Agenda papers for the 46th meeting of the Academic Council which will be held on 14th May, 1993 at 11:00 A.M. in the Seminar Hall, Mayurbhanj Complex, NEHU, Shillong for perusal and consideration.

Yours faithfully,

Encl:a.a


(A. Patton)
Registrar

7/5/93

AGENDA ITEMS FOR THE FORTY SIXTH MEETING OF THE ACADEMIC COUNCIL

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(i) Confirmation of the Minutes of the 45th meeting of the Academic Council.

The minutes of the 45th meeting of the Academic Council held on 7/8.12.92 were circulated amongst members. The following comment is placed before the Council for consideration in confirming the minutes:

1. Comments of Dr. R.N.Prasad on resolution No:AC:45:02:5:07:(vi)8- regarding upgradation to Degree level in respect of Aizawl North College.

"As far as I being a member of the Academic Council and also present myself in the meeting would like to inform you that it was not resolved in the meeting that the Council did not approve the appointment of teachers holding M.A. in Public Administration against the Political Science Post. Instead, the Council resolved to appoint the Parity Committee to decide whether an MA, Public Administration should become lecturer against the Political Science Post which should have been also recorded in the minutes. Since the Academic Council referred this matter to the Parity Committee to decide, the matter was deferred till the submission of the report of the Parity Committee to the next meeting of the Academic Council for its decision."

The recording in the minutes was that the Academic Council did not approve the appointment of teachers holding M.A. Public Administration, against the Political Science post.

3:4(1)

Item No. 3 - RATIFICATION OF ACTION TAKEN BY THE
VICE-CHANCELLOR :

(i) Approval of Syllabi for the Integrated
Three Year Degree Course.

In its 45th meeting held on 7/8.12.92, the Academic Council authorised the Vice-Chancellor to approve the syllabi for the subjects which were then not yet finalised and not placed before the 45th Academic Council meeting.

Subsequently the concerned Board of Under-Graduate Studies met and the syllabi in the following subjects as framed by the respective Board were approved by the Vice-Chancellor :

1. Sanskrit.
2. Statistics
3. Sociology
4. Geography

The matter is placed before the Academic Council for ratification.

(ii) Nomination of NEHU Representatives to the Governing Body of Affiliated College.

The Vice-Chancellor has nominated the following teachers as University representatives in the Governing Body of various affiliated Colleges . The nominations are now placed before the Council for ratification.

Name of College	Name of the University representatives.	Term
1. Raid Laban College, Shillong.	1) Dr(Mrs) V.Tandon Deptt. of Zoology NEHU, Shillong.	3 years w.e.f. 23.2.93
	2) Dr.Niklesh Kumar Deptt. of Sociology NEHU, Shillong.	-do-

- (1) Provisional affiliation granted to Acheng Rangmanpa College for up-gradation to Degree level-addition of two subjects.

The Inspection team in its reports have recommended for Upgradation of Acheng Rangmanpa College upto Degree level on the following subject - English, Garo, Bengali, Alt (MIL) History, Economics, Pol. Science, Philosophy, Assamese and Economics. The case of the College was placed in the 44th Meeting which was held on 7th & 8th August. 1992. The Academic Council has approved provisional Affiliation for a period of 3 years for upgradation to Degree level on the following subject, English, Garo, Bengali, History, Pol. Science and Philosophy. But Economics and Assamese were left out.

In view of the above, the case of the College is to be placed again in the next Academic Council Meeting for ratification.

Panel of examiners Ph.D/M.Phil

The Panel of examiners to examine the thesis/desertation of the following candidet. was approved by the respective School Board/Board of Research Studies.

The matter is placed before the Council for ratification.

Name of Candidate and Degree	Department
1. Mr. A.K. Das (Ph.D)	Mathematics
2. Mr. B.S. Koikara (Ph.D)	-Do-
3. Mr. P. C. Paul (Ph.D)	Chemistry
4. Mr. C. R. Bhattacharjee (Ph.D)	-Do-
5. Mr. A.K. Deb (Ph.D)	-Do-
6. Mr. E. Karim (Ph.D)	-Do-
7. Mr. G.S.S. Saini (Ph.D)	Physics
8. Mr. J. Joseph (M.Phil)	-Do-
9. D. Bhattacharjee (M.Phil)	Mathematics
10. Mr. S. Jajodia (M.Phil)	-Do-
11. Mr. A. Mitra (M.Phil)	-Do-
12. Ms. A. Bhattacharjee (M.Phil)	Physics
13. Miss. M. Roy (Ph.D)	Zoology
14. Mr. S. Changkija (Ph.D)	Botany
15. Mr. U.K. Sahoo (Ph.D)	-Do-
16. Mr. S. N. Joshi (Ph.D)	-Do-
17. Mr. M. Pradhan (Ph.D)	-Do-
18. Mrs. J. Sharm (Ph.D)	-Do-
19. Mr. M. Lamsal (Ph.D)	Bio-Chemistry
20. Mrs. M. Bortakur (Ph.D)	-Do-
21. Mr. Joy K. A. (M.Phil)	Botany
22. Miss T. Lyngdoh (Ph.D)	-Do-
23. Mr. D. Dutta (Ph.D)	-Do-
24. Mr. H. Kayang (Ph.D)	-Do-
25. Mrs. S. Gupta (Ph.D)	Zoology
26. Mr. J. Raju (Ph.D)	Chemistry
27. Ms. S. Dutta (M.Phil)	Mathematics
28. P. G. Momin (Ph.D)	Geography
29. L. Khuma Varte (Ph.D)	-Do-
30. K. Baruah (Ph.D)	-Do-

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Name of candidate and Degree	Department
31. M. Bor+hakur (Ph. D)	Geography
32. H. Saikia (Ph. D)	-Do-
33. M. Agarwal (Ph. D)	-Do-
34. R. Colney (Ph. D)	-Do-
35. H. J. Syiemlieh (Ph. D)	-Do-
36. H. Baruah (Ph. D)	-Do-
37. G. T. Thong (Ph. D)	Geology
38. B. Panda (M. Phil)	Geography
39. C. Laltani (M. Phil)	-Do-
40. B. Rora (M. Phil)	-Do-
41. T. Imchen (M. Phil)	-Do-
42. L. M. Kharmih (M. Phil)	-Do-
43. M. Singh (M. Phil)	-Do-
44. K. Diengdoh (M. Phil)	-Do-
45. Bibha Borah (Ph. D)	History
46. Ms. Alphonse R. Myrthong (M. Phil)	History
47. Ms. Sangha mitra P. Choudhury (M. Phil)	History
48. Ms. Darilian Suting (M. Phil)	History
49. Mr. Robert Romawia Royte (M. Phil)	Pol. Science
50. Mr. J. La lsawliana (M. Phil)	Pol. Science
51. Ms. Mukti Dolloi	Economics
52. Ms. Madhuchanda Dasgupta (M. Phil)	Economics
53. Ms. Neelakshi Medki (M. Phil)	Economics
54. Ms. Sumitra Patir (Dolloi) (M. Phil)	Economics
55. Ms. Chandrima Sen (M. Phil)	Economics
56. Mr. H. Dounyel (M. Phil)	Sociology
57. Ms. Honibou Newmai (Ph. D)	Philosophy
58. Smti. Begum Qurratun Hosna (Ph. D)	Philosophy
59. Ms. Sabita Das (Ph. D)	Philosophy
60. Ms. Tarajyoti Burogohain (Ph. D)	Economics
61. Ms. Sumitra Choudhury (Ph. D)	Economics
62. Ms. Petænienia Kharwanlang (Ph. D)	Economics

5:1:- Statute, Ordinance etc.

Amendment of NEHU Statute/Ordinances.

Prof.N.Hasan, Dean, School of Languages proposed an amendment to NEHU Statutes and Ordinances.

The intention seems to be to distinguish regular Professors from Professors appointed on contract basis and to debar the Professors on contract from attending the meetings of various academic bodies like Academic Council, Board of Research Studies, School Board, Board of Post-Graduate Studies and Steering Committees of Centres. The details of amendment proposed may be seen at Annexure 'A'.

Since Professors on contract appointments are teachers of long standing, they are expected to possess vast experience in teaching and in dealing with academic matters, it may therefore be of advantage to associate them in all meetings deliberating on academic matters.

No teacher re-employed after attaining the age of superannuation can hold appointment as Head of Depts. or Dean of Schools or any other administrative position and this is already covered and provided in clause 9 of Ordinance OE-5.

The matter is placed before the Academic Council to consider whether amendments of Statutes and Ordinances as proposed by Prof.N.Hasan, Dean, School of Languages.

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Dt. 18.1.93.

V.C. is fully aware of the absence of specific reference and provision in both the statutes and the Ordinances of Our University regarding the actual status of teachers appointed on contract basis after attaining the age of superannuation. Occasionally a confusion arose: Whether or not such teachers are members of statutory bodies of the University. To remove any doubt in the minds of Heads and Deans who are Chairman of their respective Boards, amendment to a few paragraphs seems called for.

Statute 10 A(1)(ix), after the word "Professors", read "except incumbents appointed on contract basis".

Statute 14(1)(viii) after the word "Professors", read "except incumbents appointed on contract basis".

OA 6.6.2. after the word "Professors", read "except incumbents appointed on contract basis".

OA.8.1.(iii) after the word "Professors", read "except incumbents appointed on contract basis".

OA.8.1.(ii) after the word "Professors", read, "except incumbents appointed on contract basis".

OA.9.2.(ii) after the word "Professors" read "except incumbents appointed on contract basis".

Wherever the word "Professors" appear in Regulations made under the Ordinances, the words "except incumbents appointed on contract basis" shall be added.

V.C. may kindly consider placing the proposed amendment as agenda items of the AC/EC.

Sd/-N.Hasan
Dean,
School of Languages.

Vice-Chancellor
NEHU.

Draft Ordinance on Professional Courses

The 45th meeting of the Academic Council held on 7th and 8th December, 1992, considered the report of the Committee for introduction of a Five Year Integrated Course in Social Work and RESOLVED to accept the same in principle and decided that an Ordinance may be framed to govern the course as well as other courses of a similar nature.

Accordingly, a draft Ordinance to govern professional courses is framed and placed at Annexure-'A' for consideration of the Council.

Board of Studies for Professional Courses.

1. There shall be a Board of Studies for each Department/Institution Conducting Professional Courses.

Constitution :

2. A Board of Studies for Professional Courses shall consist of the following members :

- (i) Head of the Department/Principal of the Institution
- (ii) All Professors of the Department/Institution
- (iii) Two Readers and two Lecturers nominated on rotation according to seniority to be appointed by the Vice-Chancellor.
- (iv) One teacher each from other Departments within the School having common courses with the Department/Institution
- (v) Not more than three teachers teaching allied cognate subjects to be nominated by the Vice-Chancellor on the recommendation of the Department concerned.
- (vi) Not more than three persons having specialised knowledge in the discipline and who are not employees of the university or of any of the affiliated Colleges/Institutions to be nominated by the Academic Council
- (vii) The Chairman shall have the power to co-opt not more than two External experts to attend specific meetings as and when necessary with the prior permission of the Vice-Chancellor.

Term of Office :

3. The term of office of the members of the Board other than ex-officio members shall be for a period of three years and shall be eligible for re-nomination.

Chairman :

4. Head of the Department/Principal of the Institute shall be the ex-officio Chairman of the Board.

Powers and Functions.

5. The function of the Board shall be :-

- a) to recommend to the Academic Council a panel of names suitable for appointment as examiners, papers setters etc. in accordance with the provisions of the regulations about the examinations of the University.
- b) to recommend text books when necessary.
- c) to consult specialist who are not members of the Board as and when necessary.
- d) to recommend to the Academic Council with regard to the syllabi of the courses of study and examinations in the courses with which it deals.

- e) to recommend to the Academic Council measures for improvement of the standard of the Courses and teaching in the subject.
- f) to approve subjects for research to be conducted by the Department/Institution.
- g) to consider and recommend applications for admission to the M.Phil/Ph.D and other research programmes and also to recommend the appointment of supervisors of research scholars to the School Board.
- h) to perform such other functions as may be assigned to it by the School Board, Academic Council, Executive Council and the Vice-Chancellor.

Meetings :

- 6. (i) Meetings with the Board of Studies shall be convened by the Chairman of the Board.
- 6.(ii) Special meetings may be called by the Chairman on his own or at the suggestions of the Vice-Chancellor.
- 6.(iii) Notice of the meetings shall be issued by an Administrative Officer of the Registrar's Office at least 14 days before the date fixed for a meeting.

Minutes :

- 7. The Chairman of the Board shall maintain minutes of the meetings of the Board which shall be forwarded to the Registrar's Office for record and circulation to the members.

Quorum :

- 8. The quorum for a meeting of the Board shall consist of one-third of the total membership of the Board.

Rules of Business :

- 9. The rules for conduct of meetings of the Board shall be as may be prescribed by the regulations in this regard.

5:2:1:(1)

5:2- Syllabus -

(i) Proposed Syllabus of M.Sc Forestry

The School Board of Environmental Sciences in its 19th meeting held on 17th April, 1993 approved the proposed Syllabus of M.Sc Forestry as approved by Board of Post Graduate Studies.

The proposed Syllabus is placed at Annexure-'A' for consideration of the Council.

StructureANNEXURE-'A'

- * M.Sc Forestry Programme of study shall consist of 72 credits, with approximately 18 credit hours of contact per week, equivalent to 18 papers of 100 marks. Total number of compulsory and specialization papers would be 18 in all, distributed over the 4 semester.
- * In the first and second semester students will be instructed on the core areas of the subject, covering in all 10 papers of 36 credits.
- * In the 3rd semester, the students are required to opt for one of the four specialisation streams, viz. Social and Agro-forestry, Forest protection, Forestry extension education and Forest Management.
- * Credit value of the courses differ as per requirement. Total credit in each semester are equal to 18 credits i.e., 450 marks.
- * As per requirements of course, practicals and field work is organised as part of the paper or sperate paper.
- * Student has to opt for any of the specialization stream at the end of the 2nd semester and is required to do 4 papers equivalent to 14 credits and research project works of 4 credits in 3rd semester, and 2 paper equivalent to 6 credits and research project of 12 credits in 4th semesters. Out of 16 credits of research project, 2 credits are allotted to Master's Research seminar and viva-voce.

COURSE OUTLINES: IST SEMESTER

Sl.No.	Title of Course	Credits	Marks Distribution on		
			Theo	Prac	Total
1	2	3	4	5	6
FOR 501	General Silviculture	4	75	25	100
FOR 502	Tree Seed technology and propagation	4	75	25	100
FOR 503	Forest Policy and law	3	75	-	75
FOR 504	Silvics of tree & species	3	75	-	75
FOR 505	Forest Management	4	75	25	100
		18	375	75	450

2nd SEMESTER

1	2	3	4	5	6
FOR 506	Pasture and Grassland Management	3	50	25	75
FOR 507	Forestry in Watershed Management	3	75	-	75
FOR 508	Tree Improvement	4	100	-	100
FOR 509	Soil Science *	4	75	25	100
FOR 510	Disease, Pest and weed Management	4	75	25	100
		<u>18</u>	<u>375</u>	<u>75</u>	<u>450</u>

3rd SEMESTER SPECIALISATION STREAMS

GROUP(A) SOCIAL AND AGROFORESTRY

FOR 511	Research Methodology, design, analysis of field experiment, and computer programming (compulsory course).	4	75	25	100
FOR 512 (S.A.F)	Principles of Social Forestry	3	75	-	75
FOR 513 (S.A.F)	Practice on Social Forestry	3	50	25	75
FOR 514 (S.A.F.)	Principles of Agronomy &	4	75	25	100
FOR 515 (SAF)	Research Project total 16 credits in research, 12 credits allotted in IVth Semester(FOR(SAF)518)	4	-	100	100
		<u>18</u>	<u>275</u>	<u>175</u>	<u>450</u>

GROUP(B) FOREST PROTECTION

FOR 512 (FF)	Research Methodology, design, Analysis of field experiment, and computer programming.	4	75	25	100
FOR 512 (FP)	Forest Fires and their management	3	50	25	75
FOR 513 (FP)	Forest Entomology-I	4	75	25	100
FOR 514 (FP)	Forest Entomology-II	3	75	-	75
FOR 515 (FP)	Research Project (Total 16 credits in research projects, 12 credits allotted in IVth Semester(FOR 518(FP)))	4	-	100	100
		<u>18</u>	<u>275</u>	<u>175</u>	<u>450</u>

GROUP(C) FORESTRY EXTENSION EDUCATION:

FOR 512	Research Methodology, design, analysis of field experiments and Computer Programming (Compulsory course).	4	75	25	100
FOR(E.E.) 512	Fundamental of Extension Education.	3	75	25	100
FOR(E.E.) 513	Rural Leadership and Extension, Administration	3	50	25	75
FOR(E.E.) 514	Training for farmers and extension personals	3	75	-	75
FOR(E.E.) 515	Research Project	4	-	100	100

(Total 16 credits in research, 12 credits allotted in IVth Semester) FOR(E.E.) 518

18	275	175	450
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GROUP(D) FOREST MANAGEMENT:

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FOR. 511	Research Methodology, design analysis of field experiments and computer programming (compulsory course).	4	75	25	100
FOR(F.M.) 512	Development of Forest Management	4	75	25	100
FOR(F.M.) 513	Forest Resource Management I	4	75	25	100
FOR(F.M.) 514	Forest resource Management II	4	75	25	100
FOR(F.M.) 515	Research Project	4	-	100	100

(Total 16 credits in research, 12 credits allotted in IVth Semester in FOR.(F.M.)518).

18	275	175	450
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IVTH SEMESTERGROUP(A) SOCIAL AND AGROFORESTRY

FOR(S.A.F) 516.	Principles of Agroforestry	2	50	-	50
FOR(S.A.F) 517	Practice of Agroforestry	4	75	25	100
FOR(S.A.F) 518.	Master's Research	12	-	300	300

18	125	325	450
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GROUP(B) FOREST PROTECTION:

1	2	3	4	5	6
FOR(F.P.) Forest pathology 516		4	75	25	100
FOR(F.P.) Pest and Disease Management 517		2	50	-	50
FOR(F.P.) Research project 518		12	-	300	300
		18	125	325	450

GROUP(C) FORESTRY EXTENSION EDUCATION:

FOR(E.E.) Programme, planning, monitoring 516 and evaluation.		3	75	-	75
FOR(E.E.) Forestry in Rural Development 517		3	75	-	75
FOR(E.E.) Research Project 518		12	-	300	300
		18	150	300	450

GROUP(D) FORESTRY MANAGEMENT

FOR(F.M.) Forest conservation: Formula- 516 tion and Management of Forestry projects.		2	50	-	50
FOR(F.M.) Working Plan 517		4	100	-	100
FOR(F.M.) Research Project 518		12	-	300	300
		18	150	300	450

FOR.501 : GENERAL SILVICULTURE:Credit - 4
Marks-75(T)+25(P)
Lectures-38(L)+P-12.Unit I

Definition and objectives of study of silviculture. Extent of forest in India. Need for conservation of existing forests and creation of new forests in India. Distribution of major forest types in India (As per revised classification of Champion and Seth).

Unit II

Natural Regeneration: Definition and types of Natural regeneration, Natural regeneration under clear/felling shelter wood and selection system. Operation to be carried out to obtain regeneration under these systems. Advantages and disadvantages of natural regeneration. Techniques of obtaining natural regeneration of teak, Khasi pine, ~~gamberry~~ gamberry, sal in various types of forest. Artificial Regeneration: Definition and objectives need of forestation and afforestation.

Unit.3

Forest site: Site maintenance in forest stands. Tree height as measure of site quality. Site index curve. Direct and indirect methods of site quality evaluation.

Forest influences: Influence of forest on solar radiation, humidity, soil erosion and adjoining land uses.

Unit.4

Dynamics of stand growth: Methods of Measuring diameter, height, volume & biomass of tree, Estimation of growth and yield of stands.

Practicals:

(1) Field exercises in pure and mixed stands of broad leaved and conifer species pertaining to silviculture, regeneration problems (regeneration sampling) management. ~~Compilation~~ (2) Measurement of diameter, height, volume and biomass of tree and (3) Compilation of focal volume table, for different species.

Suggested Readings:

1. Anderson, J.T. (1988). Farm Forestry Practices, Suman Book House, Delhi.
2. Bruce (1965) Forest Mensuration (3rd ed) Int. Book Distributor, Dehra Dun.
3. Chaturvedi & Khana (1987) Forest Mensuration, Natraj Publication, Dehra Dun.
4. Chaudhuri & Maiti (1990) Forest and Forest Development in India, Inter India Publication, N. Delhi.

5. Gupta(1989) Man and Forest, Scientific Book Supplies, Delhi.
6. Khanna(1985) Principle and practice of Silviculture, Int.Book Distributor, DehraDun.
7. Negi, S.S.(1985) General Silviculture, Natraj publication, Dehra Dun.
8. Padhi, G.S.(1982) Forestry in India, Intb.Book Distributor, Dehra Dun.
9. Prakash R.(1985) Proceedings of 10th Silviculture conference Vol.I and II, Natraj publication, Dehra Dun.
10. Ribbetrop, B.(1989) Forestry in British India, S.B.House, New Delhi.
11. S hah, A.(1989) Forestry for people, S.B.House, New Delhi.
12. Singh, P.(1989) Problems for Wasteland and Forest Ecology of India, SB House, New Delhi.
13. Simmon, C.E.(1978) Manual of Forest Mensuration, Periodical Experts Book Agency, Delhi.
14. Smith(1962) The Practice of Silviculture, 7th ed.(J.W.) Int. Book Distributor, Dehra Dun.

FOR.502 : TREE SEED TECHNOLOGY AND PROFAGATION

Credit - 4
 Marks -75(T)+25(P)
 Lectures-38(L)*12(P)

Unit 1

Principles and methods of seed production in self and cross polinated trees, stand selection and management.

Seed: Structure and chemical composition, development and Maturation, germination, endogenous hormonal regulation, effects of stimulators and inhibitors, dormancy its causes and breakage.

Unit 2

Seed Orchard: Historical review, planting management protection, design of seed orchards.

Essentials of seed testing and certification in forest seeds. Plus tree selection.

Unit.3 Vegetative propagation: Propagation by cutting, importance and advantages of cutting. Stem cutting, Root cutting, treatment of cutting with growth regulators and fungicides. Factors affecting regeneration of plants by cutting. Reason for grafting and budding, scion-stock relationship. Layering: factors affecting regeneration of plants by layering.

Unit 4 Principles of tissue culture and micropropagation.

Practical:

Seed testing-viability dormancy, purity and germination, pre-sowing seed treatment and other intermediate management operation, storage effect on seed viability. Transplanting and propagation by cutting, layering, visit to Nurseries(Internal evaluation).

Suggested Readings:

1. Burger, H.D. (1989) Seedlings of some tropical trees, S.B. House, New Delhi.
2. Establishment of techniques for plantations (1978) F.A.O. Publication, Rome, Italy.
3. Forest tree improvement (1985) (F.A.O. Publication, Rome, Italy).
4. Hoad, G.V. (1987) Hormone action in plant developments- A critical appraisal, Butterworths Co. Ltd. London.
5. Huxley, F.A. (1984) The problems of choosing appropriate species provenances ICRAF, Kenya.
6. Jackson, M.B. (1986) New root formation in plants and cuttings, Martinus Nijhoff Publishers, The Netherlands.
7. Khosla, P.K. & Khurana, D.K. (1987) Agroforestry for rural needs, Vol. I, ISTS, Solanki.
9. Purohit, S.S. (1984) Hormonal regulation of plant growth and development, Vol. I & II, Agrobotanical Publishers, Bikaner.
10. Ram Prakash (1986) Nursery plantation technique in Forestry in India, Suman Book House, New Delhi.
11. Sadhu (1985) Plant propagation, Scientific Book Supplier, Delhi.

Unit 1

Forest Policy: General, ecological and legal definition of forest. Importance and functions of forests (protective, productive, (Sanitary, recreational and reserve) aesthetic salient features and drawbacks of National Forest Policy 1894, 1952 & 1988.

Unit 2

Forest Laws: Constitutional safeguards available for forests. Basics of law, classification of law. Study of Indian Forest Act 1927, Forest conservation Act 1980, Environmental Protection Act, Wild Life Act, Right and Servitudes, Rights and Privileges, Property and Acquisition of property. Acquisition procedure under land acquisition Act 1884. Application of Indian Penal Code(1860), to forest offences. Theft, criminal misappropriation(403), Criminal breach of trust(404), Receiving stolen property(410); Mischief(425) Criminal trespass(441) Attempt to commit offences(511); Abetment of offences(107); Unlawful assembly(141); Concealing offenders (212), Cheating(415), Using criminal force(350); Assault(351), Wrongful Restraint(339) & Wrongful confinement(340). Instances where in the true meaning of the term offences are not considered as such. Circumstances aggravating the offences. Limitation with regards to time of prosecution.

Unit 3

Law of Criminal Procedure Powers of Magistrates, summon and warrant, bailable and non bailable, cognizable and non cognizable summary trial, acquittal and discharge.

Unit 4

Necessity of Special Forest Law: Protection extended by law to forest officers, legal powers of forest officers.

Suggested Readings:

1. Biswas, S.K. (1990) Forest administration in India, Chugh Publication, Allahabad.
2. Forest Policy, (1988) Govt. of India Publication, Delhi.
3. Forestry policies in Europe (1989) F.A.O. Publication, Italy.
4. Forestry Commission, Fifty Eight annual report and account of forestry commission (1978) HMSO. International Book Distributor, Dehra Dun.
5. Fernandes, W. & Kulkarni (1986) Towards a new Forest Policy, Natraj Publisher, Dehra Dun.
6. Jha, L.K. (1993) Forest Policy, Ashish Publication, Delhi.
7. Negi, S.S. (1985) Forest law (with explanations), Natraj publication, Dehra Dun.

8. Patel, H.M. (1986) A policy for national conservations, Natraj Publication, Dehra Dun.
9. Report of the National Commission on Agriculture (1976), Govt. of India Publication, Delhi.
10. Saharia, V.B. (1989) Wildlife law in India, Natraj publication, Dehra Dun.

FOR 504 : SILVICS OF TREE

Credits - 3
Marks-75(T)
Lectures-38.

Distribution, morphology, ~~xxx~~ phenology, growth behaviour, silviculture characters, techniques, silvicultural system of management protection and utilisation of the following tree species:

Unit 1

Conifers:

Cedrus	deodara
Pinus	Kescya

Unit 2

Broad leaved:

Michelia	Champaka
Terminalia	Myriocarpa
Gmelina	arborea
Toona	ciliata
Adina	cordifolia
Albizia	lebbek
Quercus	species
Shorea	robusta
Tectona	grandis

Unit 3

Bamboos	Artocarpus	chaptasa
	Artocarpus	hetucphyllus
	Melocana	bambusoides
	Dendrocalamus	hamiltonii

Unit 4

Fruit trees:

Emblica	officinalis
Gitrus	species

Suggested Readings

1. Brandis (1988) Indian Trees, Suman Book House, Delhi.
2. Champion (1983) Forests of India, Vol. I-4, Periodical experts Book Agency, Delhi.
3. Cowan, A.M. (1985) The trees of Northern Bengal, Periodical Expert Book Agency, Delhi.

4. David, M.S. (1987) The practice of silviculture, Natra publication, Dehra Dun.
5. Douglas, F.W. (1992) Forest farming prosperity of India, S.B. House, Delhi.
6. Gamble, G.A. (1979) Report on a botanical tour in the Lakhimpur District Assam, Periodical Experts Book Agency, Delhi.
7. Harte, J. (1989) Forest farming, Vita publication service, Arlington, Virginia, U.S.A.
8. Lal, J.B. (1989) Indian Forest, Myth and Reality, S.B. House, Delhi.
9. Luna, R.K. (1989) Plantation forestry in India, S.B. House, Delhi.
10. Parker, R.N. (1986) Forty common trees of India, S.B. House, Delhi.
11. Frakash, E. (1989) Advances in Forestry Res. in India, S.B. House, Delhi.
12. Sen, D.N. (1989) Ecology and vegetation of Indian Desert, S.B. House, New Delhi.
13. Silviculture of Indian trees (Vol. I to VI) Ed. Forest Research Institute, Govt. of India publication, Dehra Dun.
14. Singh, R.V. (1978) Fodder trees of India, Natraj publisher, Dehra Dun.

FOR. 505 : FOREST MANAGEMENT

Credits - 4
Marks - 75(T) + 25(P)
Lectures - 38 + 12 (T&P)

Unit 1

Management of plantation forests:

Technical aspect of Management; Establishment phase; choice of species and provenance, types of planting stock, nursery practices, methods of ground preparation and planting, spacing, weeding, irrigation, drainage, nutrition and road construction with reference to factors effecting current costs, future posts and the future revenue. Protection and maintenance phase: protection against fire, insect pests, diseases, animals, human. Harvesting phase: thinning, thinning in. ties, thinning, cycle, thinning type, felling and harvesting.

Unit 2

Silvicultural system: Definition and characteristics of silvicultural systems. Study of the following systems clear felling system including clear strip and alternate strip systems, uniform system, group system, shelterwood strip system, irregular shelterwood system, Indian irregular shelterwood system and group selection system, two storeyed high forest system, simple coppices system, coppice with standard system, coppice with reserve system & coppice with selection system.

Unit 3

Conversion: Definition and objectives of conversion, technique of conversion & examples of conversion.

Unit 4

Management of bamboo forest: Brief account of silviculture of bamboo, silviculture system; felling cycle, felling, rules, methods, of regeneration, tending, character of the crop, Silvicultural system applied to Road side avenues, canal plantation and alley cropping system in Agroforestry system.

Practicals & field study; One long tour(20 days) in the 1st semester in North East India.

Objectives

- * to study climatic, edaphic and biotic factors.
- * to study geology, soils, mensuration and botanization.
- * to study forest management of important forests of North East India

Suggested Readings

1. Assmann(1970) Principles of Forest Yield Study, Int. Book distributor, Dehra Dun.
2. Mathur, V.P.(1986) Forest Management, Int. Book Distributor, Dehra Dun.
3. Meyer, H.A.(1961) Forest Management, Natraj publication, Dehra Dun.
4. Sagreiya(1982) Forest and Forestry(4th ed), Int. Book Distributor, Dehra Dun.
5. Sharma, L.C.(1980) Forest economics planning and Management; Int. Book Distributor, Dehra Dun.
6. Herram, M.R.K.(1982) A text book of Forest Management, Int. Book Distributor, Dehra Dun.
7. Vardamann(1978) Tree farm business management, Int; Book Distributor, Dehra Dun.
8. Osmanston(1988) Management of forests, Natraj publisher, Dehra Dun.

FOR.506 : PASTURE AND GRASSLAND MANAGEMENT

Credit - 3
Marks-50(T)+25(P)
Lectures-25(T)+12(P)

Unit I

Classification of pasture species, their characteristics and adaptability. Establishment and cultivation of important grasses and legumes, Setaria grass and repegon grass, signal grass, para grass, stylo, siratro, centro, red and white clover).

Unit 2

Grassland types of India, suitable grasses and legumes for improving village grazing land, cultural practices for improving grassland seeding, fertilization, weed control etc.

Unit 3

Grazing management of pasture and grassland.

Unit 4

Silvipasture; research finding to show potential of silvipasture system in wasteland development. Role of grasses and legumes in wasteland management and soil conservation.

Practical

Identification of important grass species and preparation of herbarium; identification and control of common weeds, hay and soilage making.

Suggested Readings:

1. Agroforestry forage production and animal nutrition, 1st NARP Training programme ICAR, IGRI, Jhansi.
2. Breymer, A.I. (1980) Grassland systems analysis and Man, Suman Book House, Delhi.
3. Chatterjee, B.N. (1986) Principles and practices of grain legumes production, Suman Book House, Delhi.
4. Chatterjee, B.N. (1989) Forage crop production, Suman Book House, Delhi.
5. Deb Roy, R. (1988) Strategy for increased forage production through silvipastoral system. Forage production in India (ed) Punjab Singh, R.I.S.I., pp. 64-69.
6. Hedge, F. (1980) Promotion of fodder and fuelwood. B.A.I.F. Publication, Pune.
7. Lanzer, R.H.M. (1980) How grasses grow, Natraj publisher, Dehra Dun
8. Prajapati, R.C. (1979) Silvipastoral system of production from ravines, Proc. summer Inst. on silvipastoral production, IGRI Jhansi, pp. 28-40.
9. Shankarnayan & Kumar, V. (1984) Grasses and legumes for forage and soil conservation, ICAR, Pub. Delhi.
10. Singh, B.H. (1984) How grasses grow, Natraj Publication, Dehra Dun.

FOR. 507 : SOIL AND WATER CONSERVATION & WATERSHED MANAGEMENT:

Credits - 4
Marks-75(T)+25(P)
Lectures-30(T)+12(F)

Unit-I Soil and water conservation.

Types, causes and factors affecting soil erosion, land capability classification, general practices for soil and water conservation- mulching, windbreaks, shelterbelt, contour farming, strip cropping, terracing, bunding and grassed waterways, gully control, water harvesting tank.

Unit II Watershed Management

Concept of watershed management, characteristics of a watershed and their role in watershed management, preparation of watershed management plan.

Unit III Biological aspects

Soil Management, crop management, alternate land use and agroforestry, grazing management and cover crop production.

Unit IV

Engineering approaches in watershed management.

Practical: Preparation of watershed management plan.

Suggested Readings

1. Araker, H.R. (1984) Principles of soil conservation and water management, Suman Book House, Delhi.
2. Baumer, (1989) Agroforestry for watershed management, ICRAF, Kenya.
3. Chopra (1985) Approved practices of soil conservation, Natraj Publication, Dehra Dun.
4. Kanwar (1984) National seminar on water management, Agricole publishing, New Delhi.
5. Mohsin, M.A. (1984) Forestry and Watershed Management as an inter-locked system. In Training-cum-seminar on social and agroforestry in Watershed Management, Faculty of Forestry, B.A.U. Ranchi.
6. Monsin, M.A. & Prasad, R.B. (1984) Dryland farming and watershed management, B.A.U., Ranchi.
7. Morgan (1984) Soil Conservation, Natraj Publication, Dehra Dun.
8. Supper (1983) Soil Management, Natraj Publication, Dehra Dun.
9. Verma, P. (1985) Development Hill area, Natraj Pub; Dehra Dun.
10. Young, A. (1989) Agroforestry for soil conservation, ICRAF, Kenya.

FOR. 508 THREE IMPROVEMENT

Credits -4
Marks -100
Lectures-50(T)

Unit I

Population genetics, variation, heritability, progeny, hybridization, polyploidy and haploidy. Genetics of important characteristics in tree species.

Unit II

General principles of tree improvements, theoretical basis for qualitative and quantitative variation in important traits in trees, nature and extent of variation in natural population of tree species, concepts of seed stand and provenance testing, selection, superior tree grading system.

Unit III

Seed orchard establishment and progeny test; breeding method; advanced generation breeding and hybridization; breeding for disease and insect resistance.

Unit IV

Experimental design in tree breeding, GXE in tree breeding, cost benefit and YXIX of tree breeding programmes, role of biotechnology in forest tree improvement.

Suggested Readings:

1. Forest tree improvement (1985) F.A.O. Publication, Rome, Italy.
2. Hayer, H. and Smith, D. (1975) Methods of plant breeding, Mc Graw Hill Book Company, London.
3. Huxley, P.A. (1984) The problems of choosing appropriate species, provenances, ICRAF, Kenya.
4. Khosla, P.K. (1982) Advances in forest genetics, Society of tree scientist, Solan.
5. Khosla, P.K. (1985) Improvement of Forest Biomass, Society of tree scientist, Solan.
6. Khosla, & Sehgal (1989) Trends in tree sciences, Society of tree scientist, Solan.
7. Russel, G.E. (1985) Progress in plant breeding, Butterworths, London.
8. Sadhu (1985) Plant propagation, Scientific Book Supplies, Delhi.

FOR 509: SOIL SCIENCE

Credit - 4
Marks -75(T)+25(P)
Lectures-38(T)+12(P)

Unit I

Soil formation: Factors of soil formation, brief idea of important soil forming process and phases, basic idea of soil profile and its development.

Soil classification: order, suborder, group, series, type and phase.

Unit II

Soil organic matter and its impact on soil fertility source, composition and steps of decomposition. Humus: properties and role, C/N ratio.

Unit III

Occurance and distribution of micro-organism in soil and their classification. Influence on environmental factors on soil micro-organism. Micorrhizo and its role on the establishment and growth of trees.

Nitrogen cycle: amonification nitrification, denitrification, non symbiotic and symbiotic nitrogen fixation, carbon cycle: elementary knowledge.

Unit IV

Soil Fertility: Factors affecting soil fertility, essential nutrients for plant growth, methods of soil fertility evaluation, role and deficiency symptoms of N,P and K. nutrients elements and their transformation in soil, methods of soil fertility evaluation (chemical and biological methods).

Practical: Determination of H, electrical conductivity, estimation of N,P, & K, in fertilizers and manures and testing of purity Estimation of available N, P, & K, in soil fertility evaluation. Estimation of organic matter in soil.

Suggested Readings:

1. Bear, (1989) Chemistry of soils, Suman Book Distributor, Delhi.
2. Biology and experimental Design, Commonwealth Science Council, U.K., 1984.
3. Bhargava, G.F. (1989) Salt affected soils of India, Suman Book Distributor, Delhi.
4. Buckman & Brady (1984) The nature and properties of soil, Natraj publication, Dehra Dun.
5. Eldoret (1986) Amelioration of soil by trees, Commonwealth Science Council, U.K.
6. Knuti (1984) Profitable soil management, Natraj Publication, Dehra Dun.
7. Nair, P.K.R. (1984) Soil Productivity aspect of agroforestry, ICRAF, Kenya.
8. Negi, S.S. (1985) Introductory soil Science, Natraj Publication, Dehra Dun.
9. Negi, S.S. (1985) Soil Conservation, Natraj Publication, Dehra Dun.
10. Physical and chemical methods of soil and water analysis (1984) F.A.O. publication, Rome, Italy.
11. Somani, L.L. (1986) Bifertilizer, Scientific Book Suppliers, Delhi.
12. Somani, L.L. (1985) Alkali Soils their reclamation, Scientific Book Supplies, Delhi.
13. Varadey (1982) Indian Soil Science literature, Agricole Publishing Academy, New Delhi.
14. Zelenogradshaya (1986) Tropical and sub tropical soil science Mir publishers, Moscow.

FOR 510 : DISEASE, PEST AND WEED MANAGEMENT

Credits-4
 Marks -75(T)+25(P)
 Lectures-38(T)+12(F)

Unit I

Diseases: Bried history and importance of forest pathology, different symptoms of diseases, general principles of forest disease control, fungicides and their use in nurseries and forest plantations, seed pathology certification and treatment.

Unit II

Pests : Insect pests responsible for damaging seedlings in nurseries and forest (teak, Khasipine, Gamhar, siris).

Unit III

Principles and methods of integrated pest management in nurseries and forest.

Unit IV

Weed - Characteristics & classification, injurious effects of weeds and losses caused, problems of weeds in nursery plantation, crop weed competition and weed control and integrated control measures .

Practical: Study of symptoms of plant's diseases. Identification of important diseases of trees and seedlings. Field collection and herbarium, preparation, collection, preservation and identification of insect pest of important trees and seedlings.

Suggested Readings

1. Bakshi, B.K. et al (1972) Forest disease survey final technical report, F.R.I., Dehra Dun.
2. Bakshi, B.K. (1976) Forest pathology, Principles and practices in forestry, F.R.I. publication, Dehra Dun.
3. Boyce, J.S. (1961) Forest pathology, Mc Graw Hill Book Co. Inc. New York.
4. Broune, F.G. (1968) Pests and diseases of forest plantation trees, Oxford; clarendon press, Oxford.
5. Jha, I.K. (1987) Applied agricultural Entomology, New Central Boom agencies, Calcutta.
6. Singh, P. and Singhs, S (1987) Pest and pathogen management in agroforestry system, In Agroforestry for rural development, IGTS publication, Solan.
7. Tatlar, J.A. (1989) Diseases of shade trees, (IIIrd Edition), Acad. Press, New York.

**BOR 511 RESEARCH METHODOLOGY, DESIGN, ANALYSIS OF FIELD
EXPERIMENT AND COMPUTER PROGRAMMING:**

Credit-4
Marks -75(T)+25(F)
Lectures-35(T)+12(F)

Unit I

Definition of applied science and research. Classification of research. Critical appraisal of research studies. Planning research projects. Advance planning and its value. Methods of data collection. Mechanism of analysis, interpretation and presentation.

Unit-II

Population and sample, frequency table, mean, mode, median, measurement of dispersion, mean deviation, standard deviation, variance, standard error, correlation, regression and prediction, multivariate analysis.

Test of significance-Test for means in one sample and two sample cases (z and t tests). Z-Test for proportion, X^2 -test of variance in two sample cases, Test of equality of K-means (one way and two way, classification). Application to design of experiments. Test of equality of K-variance (Bartlett's test).

Unit III

Basic principles of experimentation namely Randomization Replication and local control. Lay out and analysis of data of completely Randomized, randomized block, Latin square designs, factorial design, split plot and strip-plot designs.

Unit IV

Computer oriented producers, flow charts and decision table, fortran programming preliminaries, Fortran constants and variables, arithmetic expression, Input-output statements, simple computer programmes.

Practical : Based on theory paper
on computer system.

Practice

Suggested Readings:

1. Chaddha, A. (1989) Agricultural statistics in India, Suman Book House, Delhi.
2. Dear, K.B.G., Mead, R. & Rilay, J. (1987) ~~Five~~ Statistical tools for agroforestry research bivariate analysis for intercropping experiments. ICRAF, Kenya.
3. Dospekhov, E.A. (1984) Field experimentation, Statistical procedures, Mir publishers, Moscow.

4. Howe, D.R.(1989) Data analysis for data base design. Arnold publication, London.
5. Date, C.J.(1986) An introduction to Data base systems, Addison, Wesley.
6. Martin, J.(1976) Principles of Database Management, Prentice Hall, New York.

GROUP A. IIIrd SEMESTER

FOR.(S.A.F) 512: PRINCIPLES OF SOCIAL FORESTRY

Credits -3
 Marks -75(T)
 Lectures-38(L)

Unit I

Need, concept of social forestry; Scope of social forestry. Different types of social forestry, practices and their importance (Farm forestry/Agroforestry, Extension forestry, Urban forestry, Recreational forestry.

Unit II

Combining apiculture, lac culture and tassar culture in social forestry projects to uplift the economic condition of the farmers. Incentive under social forestry programmes (techniques of rearing).

Unit III

Various suitable social forestry projects to uplift the economic condition of the farmers. Incentive under social forestry programmes.

Unit IV

Role of different section of society in social forestry programme. Impact of social forestry in village economy (supported by case study). Role of Research, training and extension in implementation of social forestry.

Suggested Readings:

1. Foley, G.(1989) Farm and community forestry, Suman Book House, Delhi.
2. Forestry for local community development(1978) F.A.O. Publication, Rome, Italy.
3. Jha, L.K. & Sen, P.P.(1991) Social Forestry, Himalaya Publishing House, Bombay.
4. Mishra, A(1986) Cost benefit analysis, Natraj Publication, Dehra Dun.
5. Prasad, V.N.(1985) Principle and practice of social-cum-community forestry, Int.Book Distributor, Dehra Dun.
6. Rao, R.(1979) Introduction to Social Forestry, Oxford Publication, Calcutta.

7. Swarup, R. (1987) Management of Social Forestry in India, Suman Book House, Delhi.
8. Tiwari, K.M. & Singh, R.V. (1983) Social Forestry plantations, Natraj publication, Dehra Dun.
9. Tiwari, K.M. (1985) Social Forestry in India, Natraj publication, Dehra Dun.
10. Tiwari, K.M. (1988) Social Forestry and rural development, Intl. Book Distributor, Dehra Dun.

FOR. (S.A.F) 513 : PRACTICE OF SOCIAL FORESTRY

Credit - 3
 Marks -50(T)+25(P)
 Lectures-25(T)+12(P)

Unit I

Nursery management in social forestry (layout of nursery, seed bed size, soil preparation, seed requirement). Seed collection, seed viability and germination test, sowing, weeding, grading of nursery stock, methods of planting.

Unit II

Economics of bund and block plantation in farm land.

Unit III

Wasteland: Definition. Importance of soil survey, afforestation under saline and alkaline soils, lateritic soil, waterlogged areas, desert areas (Sand duna, stabilization and creation of wind break and shelterbelt) Ravine land, open cast coalmine areas.

Unit IV

Production potential of alley cropping in wasteland. Suitability at different forest SFP for S.F. programme under different soil conditions.

Practicals: Formulation of social forestry project for the assigned village.

Suggested Readings:

1. Appropriate technology in forestry (1982) F.A.O. publication, Rome, Italy.
2. Douglas, J.S. (1985) Forest Farming, prosperity in Indian Bisan Singh publication, Dehra Dun.
3. Fred, et.al, (1989) Reforestation of arid land. VITA Publication service, U.S.A.
4. Jha, L.K. & Sen P.P. (1991) Social Forestry, Himalayan publication, Bombay.
5. Ram Prasad (1988) Technology of wasteland development, Suman Book House, Delhi.
6. Singh, S.P. (1985) Wasteland development, Agricole publication, New Delhi.

7. Singh, S.P. (1989) Wasteland development, Suman Book House, Delhi.
8. Yadav, H.R. (1987) Wasteland Diagnosis and Treatment, Suman & Book House, Delhi.

FOR. (S.A.F.) 514 : PRINCIPLES OF AGRONOMY AND CROPPING SYSTEM

Credits-4

Marks-75(T)+25(F)

Lectures-38(T)+12(P)

Unit I

Agronomy: Definition, scope, classification of field crops according to growing season, characteristics of good seed and factors affecting germination and stand establishment, sequence of various agronomical practices and their role of crop production, role of water in crop production, forms of soil moisture and their importance in crop production. Factors affecting water use efficiency.

Unit II

Cropping system: Concept and development of various cropping systems monoculture, multiple cropping (parallel, in series, multi storied), inter cropping, mixed cropping, relay cropping their requirements and limitation.

Unit III

Crop production: Study of crops under the following heads:

- i) Origin and distribution
- ii) Soil and climate
- iii) Seed variety and sowing, manuring, irrigation, interculturing and weed control.

Unit IV

Plant Protection measures, harvesting, threshing and storage (cereals, paddy, pulse, peas, gram, oil seeds, mustard, safflower, plantation of tea and coffee, Horticulture : Pineapple, banana.

Practical:

Identification of seeds and plants of crops. Calculation of seed rates, seed sampling for testing. Identification of manures and fertilizers, calculation of manures and fertilizer of application.

Suggested Readings:

Chatterjee, B.N., Maiti, S. and Mandal, B.K. (1989) Cropping system: Theory and Practice, Oxford and IBH Publishers, Delhi.

Morachand (1992) Crop production, Kalyani Press, W.B.

De, G.C. (1989) Fundamentals of Agronomy, Oxford and IBH Publisher, Delhi.

GROUP A - IVth SEMESTERFOR(S.A.F) 516 : PRINCIPLES OF AGROFORESTRY

Credit - 2
 Marks -50(T)
 Lectures-25(L)

Unit I

Definition, objective, need and various protective and ameliorative gains. Basic idea of agroforestry as practiced in traditional system.

Unit II

Classification of agroforestry systems. Characteristics of ideal agroforestry tree species and intercrops.

Unit III

Functional relationships of trees, crops and livestock. Incentives for agroforestry systems.

Unit IV

Energy crisis and role of agroforestry. Need of research, training and Extension in agroforestry system.

Suggested Readings:

1. Desai, V.(1986) Issues in Agriculture and Forestry, Natraj Publication, Dehra Dun.
2. Howes, K.M.W. & Rummery, A(1986). Integrating agriculture and forestry, Natraj publication, Dehra Dun.
3. Jha, LmK.(1993) Advances in Agroforestry, Jyoti publication, Dehra Dun.
4. Khurana and Khosla(1989) Agroforestry for rural need, I.S.T.S., Solan.
5. Princeley, T.R.(1989) Agroforestry for sustainable Development and economic implecations, proceeding of workshop, Commonwealth Science Council, U.K.
6. Furi, Khosla & Khurana(1987) Agroforestry system a new challenge, I.S.T.S., Solan.
7. Sen Sarma, P.K. & Jha, L.K.(1993): Agroforestry: Indian Perspective, Ashish Publication, Belhi.

FOR.(S.A.F) 517 : PRACTICE OF AGROFORESTRY

Credits - 4
 Marks-75(T)+25(P)
 Lectures-38(T)+12(P)

Unit I

Crops, fodder, timber, fuelwood production through agroforestry system in wastelands, agroforestry system for crops fodder production; choice of crops, fodder; potential of pasture production under agroforestry.

Unit II

Fodder tree species suitable for different climatic zone. Conservation of surplus fodder for lean period (Silage preservation, hay making), Research priority under agroforestry system to produce maximum animal feed. On farm research, a case study of on farm research.

Unit III

Agroforestry as an alternative to shifting cultivation (area affected by shifting cultivation, in NE hill states, steps involved in shifting cultivation, comparative analysis of shifting cultivation and improved technology). Few models for the rehabilitation of shifting cultivation land. Soil and moisture conservation and fertility building under proposed agroforestry models.

Unit IV

Potential of alley cropping in agroforestry systems (types of alley cropping, management techniques in alley farming, alley cropping and formation of natural terrace in hilly terrain. Food fodder and fuel production under alley cropping system.

Practicals

Field study - Study of the agroforestry models at different institutes.

Suggested Readings:

1. Agroforestry technology information kit, International Institute of rural reconstruction, Silong, Cavite, Phillipinas.
2. Arora & Grewal (1990) Agroforestry Research, Surya publication, DehraDun.
3. Huxley, P.A. (1983) The role of trees in agroforestry. Some comment, ICRAF, Kenya.
4. Huxley, P.A. (1984) The tree/crop interface approach, ICRAF, Kenya.
5. Khosla, P.K. and Khoshoo (1989) Agroforestry for rural needs, (Vol. I & II) I.S.T.S., Solan.
6. Nair, M.A. & Sreedharan, E. (1986) Agroforestry farming system in the homesteads of Kerala, South India, Agroforestry system, ICRAF, Kenya.
7. Nair, P.K.R. (1984) Soil productivity aspects of agroforestry, ICRAF, Kenya.
8. Rocheleau, D. (1989) Agroforestry for dryland Africa, ICRAF, Kenya.
9. Young, A. (1989) Agroforestry and its potential to contribute to land development in tropics, ICRAF, Kenya.
10. Young, A. (1989) Agroforestry for soil conservation, ICRAF, Kenya.

FOR(S.A.F) 518 : RESEARCH PROJECT

Credits - (+12)

The course aims at giving practical training to the students, to raise specialisation, horti and pasture crops in different condition on the land area allotted to them for better understanding of the inter-relationship of various factors of production and skills in doing the operations to get optimum result. The course gives an opportunity to the students to apply all the theoretical principles of Social and Agroforestry. The course has total 16 credits 14 in M.Sc thesis and 2 credits in viva voce (FOR.515 + 518).

GROUP (B) IIIRD SEMESTER**SPECIALISATION STRESMS FOREST PROTECTION**

FOR 511 : RESEARCH, METHODOLOGY, DESIGN ANALYSIS OF FIELD EXPERIMENT AND COMPUTOR PROGRAMMING: Credit-4

(Compulsory for all special group)

FOR.(F.P.)512 : FOREST FIRES AND THEIR MANAGEMENT

Credit - 3
Marks-50(T)+25(F)
Lectures-38(T)+12(P)

Unit I

Fire as a resource management tool with proper application in forestry. Nature and classification of forest fires.

Unit II

Factors affecting fire spread, general information on combustion, combustion of weed, characteristics and calorific value of forest combustible elements. Ecological principles and their application to fire, effect of fire on soil, air, water, vegetation and wildlife.

Unit III

Detection of forest fires, methods of extinguishing forest fires, moder methods of forest fire control.

Unit IV

Fire as a natural process in forests, use of forest fires in silvicultural practices, techniques and application of prescribed control burning.

Practical

Study of effect of uncontrolled fire on the micro-fauna, nutrient status of soil.

Suggested Readings:

1. Gupta, A(1981) Man & Forest, Scientific Book Supplies, Delhi.
2. Sen, P.P.(1984) Forest fire, Report-I & II, W.B.
3. Forest fires and their management, I.R.I College, Dehra Dun, 1981.

FOR.(F.P.) 513 FOREST ENTOMOLOGY-I

Credits -4
 Marks-75(T)+25(F)
 Lectures-38(T)+12(P)

Nature of damage, life cycle and control of important insect pests of Indian trees.

Unit I

Shorea robusta - *Hoploceramb spinicornis*.
Tectona grandis - *Hyblae purera*, *Eutectona macherillis*.

Unit II

Bomba ceiba - *Tonica niviflora*
Cedrela toona - *Hypsiphyla robusta*
Dalbergia sissoo - *Plecoptera reflexa*, *caldatrostis*, *melltricha*.

Unit III

Oaks - *Malacceroma indica*, *Lymantria obsuscata*.
 Exotic pines - *Agrotis ipsilon*, *Hylobius angustus*
 Populus species - *Apriona cinerrea*, *pygaera fulgurita*
 Eucalyptus - *Celosterna scabrator*, *Myllacensus*

Unit IV

Ailanthus excelsa - *Attewa fabricella*
Gmelina arborea - *Calopepla leyana*, *Tingis*, *beesoni*
 Subabul - *Heteropsylla cubane*.

Practical: Collection, preservation and identification of insects pests of seeds, seedlings and trees.

Suggested Readings:

1. Stebbing, E. (1914) Indian Forest Insects, India Govt. Publication, Dehra Dun.
2. Nayar, K.K., Anantha Krishnan & David, B.V. (1982) General and applied entomology, Tata Mc.Graw Hill Publishing Company, Delhi.
3. Beeson, C.F.C. (1942) Ecology and control of forest insects of India and the neighboring countries, Govt. of India publication, Dehra Dun.
4. Butane, D.K. (1979) Insect and fruits, Periodical expert Book House, New Delhi.
5. Pradhah, S. (1969) Insect pests of crops, National Book Trust of India, New Delhi.
6. Pradhan, S. (1969) Text Book on Agril. Entomology, ICAR, New Delhi.
7. Immus, A.D. (1967) A General text Book of Entomology, Asia Publishing House, Delhi.
8. Jha, L.K. (1987) Applied Agricultural Entomology, Central Book Agency, Calcutta.

5:2:1(27)

FOR(F.P.) 514 FOREST ENTOMOLOGY! II

Credits - 3
Marks- 50(T)+25(F)
Lectures-25(T)+12(P)

Unit I

Spike diseases of sandal wood tree(Life cycle of vector insects).
Pest of Khasipine, Pest problems of social forestry plantation.

Unit II

Pest problems in agroforestry systems.

Unit III

Pest of felled timbers.

Unit IV

Pests of seeds and their management, pests of forest nurseries and their management.

Practical

Collection, identification and study of life cycle of seed pest & nurseries pest.

Suggested Readings:

- 1.8. Graham, A.S. & Knight, F.B. (1967) Principles of Forest Entomology McGraw Hill Book Company, London.
2. Jha L.K. (1987) Applied Entomology, New Central Book Agency, Calcutta.
3. Sen Sarma, P.K. (1985) Insect interactions in forest and Agro-ecosystems; Jugal kishore & co. DehraDun.
4. Singh P. & Singh, S. (1986) Pest and pathogen management in Agro-forestry system, Agroforestry for rural needs (D.Khosla & Khurana), I.S.I.T.S., Solan.
5. Verma, A.K. and Dogra, G.S. (1978) Temperate fruit pests and their control, Pesticides, 100-104.

IVTH SEMESTER

FOR.(F.P.) 516 : FOREST PATHOLOGY

Credits-4
Marks-75(T)+25(P)
Lectures-38(T)+12(P)

Unit I

Different symptoms and causal agents of diseases. Nursery diseases and their control. Mycorrhiza in relation to forest pathology.

Unit II

Non-parasitic and phanerogamic diseases of forest trees, physiological disorders of forest trees, Environmental factors in relation to diseases of forest trees.

Unit III

Importance of seed pathology. Detection and identification of important seed-borne pathogens, seed standards and certification.

Unit IV Diseases of few important forest trees (Sal, teak, Sandle, Kharipinees & gomhan).

Practical

Field survey, collection and preservation of herbarium, Identification of diseases on the basis of symptoms in fields and laboratory. Isolations of pathogens and proving Koch's postulates. Use of different types of sprayers, dusters and seed dressing drum.

Suggested Readings:

1. Bakshi, B.K. et al (1972) Forest disease, survey final technical Report, F.R.I. publication, Dehra Dun.
2. Bakshi, B.K. (1976) Forest pathology, Principles and practice in forestry, F.R.I. Publication, Dehra Dun.
3. Boyce, J.S. (1961) Forest pathology, McGraw Hill Book Co. Inc. N New York.
4. Brouni, F.G. (1968) Pests and diseases of forest plantation trees, Oxford clarendon Press, Oxford.
5. Tattar, T.A. (1989) Diseases of shade trees (IIIrd Edition), Academy Press, New York.

FOR. (F.P.) 517 : PEST AND DISEASE MANAGEMENT

Credits-2
Marks - 50(T)
Lectures-25(T)

Unit I

Principal methods of insect pest suppression, silvicultural, chemical control (insecticides, attractants, repellants and chemosterilants) & biological insect pest suppression.

Unit II

Integrated pest management. Use, care and maintenance of duster, sprayers and fumigating equipments.

Unit III

Principles of forest disease control through cultural, silvicultural, biological, chemical and resistance breeding.

Unit IV

Quarantine- Plant Quarantine organisation of India. Forest plant quarantine, Chemotherapy: Mechanism and action. Tropical and systemic chemotherapy.

Suggested Readings:

1. Apple, J.L. And Smith, R.F. (1976) Integrated pest Management, plenum publishing co-operation, New York.
2. Beroza, M. (1970) Chemicals controlling insect behaviour Academic Press, New York.
3. Butana, D.K. (1975) Crop pests and their control, Pesticides 69(3) 21-29.
4. Flint, M.I. & Bosch, R.V. (1981) Introduction to integrated pest management, plenum publishing corporation, New York.
5. Jha, L.K. (1985) Studies on the effect of chemostainlants on the reproductive organs of an insect. University Microfilm, International publication, Michigan, U.S.A.

6. Prinsley, R.T. (Ed) (1987) Integrated crop protection for small scale farms in E & C. Africa, Commonwealth Science Council, UK.
7. Rabb, R.L. Todd, F.A. & Elits, H.C. (1976) Integrated Pest Management, Plenum Press, New York.
8. Reitz, L.P. (1960) Biological and chemical control of plants and animal pests, American Association for Advancement of Science, Washington.
9. Singh, J.P.C. (1968) Insecticides and pest control, Current Book House, Bombay.

FOR(F.P.) 518 RESEARCH PROJECT

Credits- +12

The course aims at giving practical training to the students related to forest protection in forestry and agro-forestry. The course gives an opportunity to the students to apply all the theoretical principles of forest protection. The course has total 16 credits, 14 in M.Sc thesis and 2 credits in viva-voce. (FOR(FP) 515+518).

IIIRD SEMESTER

SPECIALISATION STREAMS GROUP C FORESTRY EXTENSION

EDUCATION

FOR 511 (Compulsory Course).

FOR(E.E.) 51 2 : FUNDAMENTAL OF EXTENSION EDUCATION

Credit-3
Marks-75(T)
Lectures-38(T)

Unit I

Meaning, definition, scope and importance of extension and formal education. Objectives, principles and philosophy of extension education. Concept of community development and rural development.

Unit II

Extension teaching methods. Individual group and mass contacts. History of extension activities viz. Gurgaon experiment, Srinikatan & Etawah pilot project, Nilokheri Project etc.

Unit III

Audio-visual aids their classification. Importance and utility of mass media.

Unit IV

Meaning, definition and scope of psychology and anthropology, relationship with extension education. Meaning of learning, important principles of learning, principles of associations. Meaning of behaviour and determinants of behaviour.

Suggested Readings

1. Desai, R.G. Farmers societies and Agricultural Development, Natraj publication, Dehra Dun.
2. Banerjee S. (Eds) (1986) Culture and communication, patriot publishers, New Delhi.
3. Extension Education in community Development (1961) Ministry of Food and Agriculture, New Delhi.
4. Forestry Extension methods (1987) Sl.No.80 F.A.O. Publication, Corchello, Rome, Italy.
5. Forestry extension organisation (1986) Sl.No.66 F.A.O. Publication, Rome, Italy.
6. Raintree, J.B. & Hoskins, M.W. (1988) Approved R & D support for forestry extension. In F.A.O. Planning forestry extension programmes. Report of a Regional expert, Consultation, Bangkok, F.A.O. IR-65.
7. Rana (1990) Forest Extension, Suman Book House, Delhi.

FOR (E.E.) 513 : RURAL LEADERSHIP AND EXTENSION ADMINISTRATION

Credit - 3
Marks - 50(T) + 25(P)
Lectures - 25(T) + 12(P)

Unit I

Rural sociology in extension. Introduction to concepts of society, community, association, institution, group and culture socialization, caste, class and social change.

Unit II

Meaning and definition of Leadership, role of rural leadership in rural development. Village leadership types, their functions.

Unit III

Identification and training of local leaders, motivation, achievement motivation.

Unit IV

Extension and administration - definition and distinctive characteristics. Function of extension administration. Administration organisation of National agricultural extension system.

Practical:

Development of schedule and questionnaire for Bench Mark, survey, evaluation & monitoring of extension programme. Planning of extension programme like organising meeting, tours and visit, kisan gothis, demonstrations, campaigns & field-days.

Suggested Readings:

1. Atkinson, J.W. (1986) An introduction to motivation, Indian Edition: Affiliated East-west Press: Delhi.
2. Gellerman, S.W. (1969) Motivation and productivity, American Management Association. Indian Edition, Bombay D.B. Reraporevale.

3. Heredero, J.M. (1985) Rural Development and social changes, ~~Max~~ Manohar publication, New Delhi.
4. Maslow, A.H. (1970) Motivation and personality, Harper & Row Publication, New York.
5. Singh, D. (1974) Motivation and Rural Development, Two studies on Indian Farmers, Minerva Associates, Calcutta.
6. Swarnkar, G.P. (1989) Women participation in rural environment, Chugh publication, Allahabad.

FOR (B.E.) 514 : TRAINING FOR FARMERS AND EXTENSION PERSONAL

Credit - 3
Marks - 75(T)
Lectures - 38

Unit I

Meaning and concept of training and education and their relationship. Elements of training process. Trainers, trainees, content, training methods.

Unit II

Phase of training programmes pretraining, training and post-training (basic knowledge).

Unit III

Types of training for extension personnel, pre-service, induction and in service training. Training programme for T & V (training & visit) functionaries, monthly workshop and fortnightly training, other training programmes prevalent in the state.

Unit IV

Farmers training objectives, types of training programmes including kisan vidapeeth and krishi vigyan kendras in the state.

Suggested Readings :

1. Agroforestry Technology information Kit. International Institute of Rural Reconstruction, Silong, Phillipines.
2. Baumgartel, H. Bennis, W.G.: De N.R. (1967) Readings in group development for Manager and trainers, Asia Publishing House, Bombay.
3. Beld, J.A. (1987) Guidelines for training in rapid appraisal for Agro-forestry Research and Extension, Commonwealth Science Council, London, U.K.
4. Halpern, J.M. (1967) The changing village community, Prentice Hall, New Delhi.
5. Heredero, J.M. (1968) Training and achievement motivation and Leadership, Jesuit Editorial Association for India, Delhi.
6. Lynton, R.P. and Pareek, V. (1967) Training for development The Dorsey Press, Homewood.
7. Roy, F.G. Kivlin, J.E & Sen, L.K. (1968) Agriculture Innovation Among Indian Farmers. National Inst. of community development, Allahabad.

IVTH SEMESTER~~XXX~~FOR(E.E.) 516 PROGRAMME, PLANNING, MONITORING AND EVALUATION:

Credit - 3
 Marks - 75 (T)
 Lectures - 38 (T)

Unit I

Meaning, principles and steps in programme planning ~~with reference to~~ with reference to planning of social forestry development programme.

Unit II

Abilities needed by planner programme planning and programme projection, concept of needs.

Unit III

Monitoring: definition and importance, Evaluation: Meaning and purpose, methods and steps involved in evaluations.

Unit IV

Elements of the forestry production in farm and villages, Basic knowledge of various five year plans.

Suggested Readings:

1. An operational guide to monitoring and evaluation of social forestry in India (1986). F.A.O. publication, Rome, Italy.
2. Biswas, S.K. (1989) Rural environment development and planning. Chugh publication, Allahabad.
3. Economic analysis of forestry projects (1979) E.F.S. 17 No. F.A.O. publication, Rome, Italy.
4. Guideline to practical project appraisal v.N. Natraj publisher, Dehra Dun (1980).
5. Guideline to project evaluation (IN) Natraj publisher, Dehra Dun (1982).
6. Monitoring and evaluation of participatory forestry projects (1985) Sl.No.60, F.A.O. publication, Rome, Italy.
7. Nautiyal, J.C. (1989) Forest planning process in India, Natraj publisher, Dehra Dun.
8. Sharma, L.C (1980) Forest economics planning and Management, Bishen Singh publication, Dehra Dun.

2x

FOR(EE) 517: FORESTRY IN RURAL DEVELOPMENT

Credit - 3
 Marks - 75 (T)
 Lectures - 38 (L)

Unit I

Nature and scope of the subject, principles and theories related to rural development, concept of land use and settlement planning for rural development.

Unit II

Rural economy - rural resource evaluation, physical and human resources and their regional patterns in India. Rural forestry based industries and their influencing factor, socio-economic dimension, infrastructural facilities and amenities and their regional pattern.

Unit III

Rural Development programmes - IRDP, Small Farmers and Peasant Development Programme, Drought Prone Area Development. Hill Area Development programme.

Unit IV

Development strategies for self-sustained growth of rural economy, role of Government and voluntary agencies.

Suggested Readings:

1. Alam, S.N. (1982) Settlement system of India, Oxford and IBH publication co; New Delhi.
2. Bhat, L.S. (1976) Micro-level planning, A case study of Karnal area, Haryana, Concept, N. Delhi.
3. Chisholm, M. (1967) Rural settlements and Landuse, John Wiley. New York, 1967.
4. Forestry and Rural Development Sl.No.26 F.A.O. publication, Rome, Italy.
5. Graham, E.R. (1944) The natural principles of landuse, Oxford University Press, New York.
6. Mishra, R.P. (1979) Rural area Development perspectives and approaches, Sterling, New Delhi.
7. Mishra, R.P. (1980) Rural Development, Capitalist and Socialist patterns, (5 volume) Concept Publishing Co. New Delhi.
8. Pant, M. (1984) Forestry and rural development, Madhuri Publishers, Dehra Dun.
9. Rama Chandran H. (1980) Village clusters and rural development, Concept publishing co. New Delhi.
10. Sen, K. (Ed) (1972) Readings in micro-level planning and Rural growth centres, NICD, Hyderabad.
11. Wanmali, S. (1983) Service centres in Rural India. P.R. Publishing corporation, Delhi.

FOR(E.E.) 518 : RESEARCH PROJECT

Credits - + 12

The course aims at giving practical training to the students related to extension education. The course gives an opportunities to the students to a poly all the theoretical principles of forestry extension education and rural development. The course has total 16 credits 14 in M.Sc thesis and 2 credits in viva voce.

Research project is divided into two semesters, (3rd and 4th).
FOR(E.E.) 515 + 518).

THIRD SEMESTER

Group D. SPECIALIZATION STREAM I - FOREST MANAGEMENT

FOR 511 (Compulsory Course).

FOR(F.M.) 512 : DEVELOPMENT OF FOREST MANAGEMENT

Credit - 2
Marks -50 (T)
Lectures-25 (T)

Unit I

Pre-historic and early times, hunting and the development of forest policies in England. Development of Forest Management in France, Germany and Australia.

Unit II

Even aged forestry and periodic blocks, conversion of coppice to high forests, clearfelling and planting pure stands, mixtures and irregularity, multifarious silvicultural system; Progress in Switzerland : Developments in yield regulations and stand management; Development of Forestry education in Britain.

Unit III

Future trends in forest managements: Demand for forest produce ~~material~~ material goods and services. Efficiency of production, efficiency of harvesting, efficiency of administration.

Unit IV

History of Forestry in India, Introduction. Forests through vedic Maurya, Gupta, Mughals and early British periods, organization of Indian forests and progress of Forestry in India before and after independence. Mandate of National Wasteland Development Board, ICFRE and other affiliated institutes. Territorial and silvicultural divisions of forests. Administrative organization.

Suggested Readings:

1. Chaudhuri & Maiti(1989) Forest and forest development in India, Inter India publication, New Delhi.
2. Jack Wesoby(1989) Introduction to world forestry. The Library, Botanical Institute Universities of Aarhus, Nordlandsvej, ~~Den~~ U.K.
3. Meyer, H.A. (1961) Forest Management, Natraj publication, Dehradun.
4. Ram Prakash(1986) Forest Management, Int. Book Distributor, Dehradun.
5. Ribbetrop, B. (1989) Forestry in British India Suman Book House, New Delhi.
6. Saqreiya(1982) Forest and Forestry, Bishan Singh, Mahendra Pal Singh publication, Dehra Dun.

FOR. (F. M.) 513 : FOREST RESOURCE MANAGEMENT-I

Credits - 4
 Marks - 75 (T) +25 (P)
 Lectures- 38 (T) +12 (P)

Unit I

Concept of Normality: Definition and history and effect of silvicultural systems on normality, normal growing stock of uneven and even aged forests. Sustained yield: Meaning and origin of the concept, types of sustenance, means of regulation, objective, and justification of sustained yield.

Unit II

Site management, growing stock and increment: General considerations, forest and specific types, stand types, volume and increment of stands, effect of increment on working methods, factors of site fertility, site preparation and factors influencing site assessment.

Unit III

Felling decision: Introduction, definition and concept, rotation in regular and irregular crop, types of rotation, rotation to control the supply of certain services, to control output of material, to control tangible forest goods in form and quantity, rotations to control the monetary returns. Felling as a measure of stock control sensitivity of felling age to change in factors like growth rate, future prices, future costs, discount rate, internal rate of return, net discounted revenue, present net worth soil/land expectation value, length of rotation, rotation and conversion period.

Unit IV

Forecast, control and regulation of yield: Introduction, definition of term, yield, final yield, intermediate yield, sustained yield, total yield, yield capacity, yield determination, potential yield, regulated yield, planned yield, yield control forecasting potential yield, method of forecasting yield, choice of method yield regulation and silvicultural system regulation in regular forests clearfelling system. Regular shelterwood systems, yield regulation in irregular forest. Yield model of plantations in the tropics. Concept and application of volume and yield table.

Practical

Field experiments on thinning, pruning, copping and pollarding compilation of local volume table for different species to forecast potential yield.

Suggested Readings:

1. Brasnett, V.V.I. (1952) Planned management of forests, Bishan Singh, Mahendra Pa l Singh Publication Dehra Dun.
2. Chaturvedi & Khanna (1985) Forest Mensuration, Natraj Publication, Dehra Dun.
3. Jerram (1980) A text Book on forest management, Intl. Book Distributor, Dehra Dun.
4. Kumar, R. (1989) Environmental Planning, Resource & Development Suman Book House, New Delhi.
5. Loetsch, H. (1961) Forest Inventory (Vol. I & II) Natraj Publication, Dehradun.
6. Mathur, V.P. (1985) Forest Management, Natraj publication, Dehra Dun.
7. Meyer, H.A. (1961) Forest Management, Natraj Publication, Dehradun.
8. Pant, M.M. (1980) Forest Economics and Evaluation, Natraj Publication, Dehra Dun.
9. Singh, A.K. (1984) Forest Resources economy and environment, Suman Book Distributor, New Delhi.

FOR(F. M.) 514 FOREST RESOURCE MANAGEMENT - II

Credits -4

Marks - 75 (T) +25 (P)

Lectures-38 (T) +12 (P)

Unit I

Introduction: Population forest relationship. Requisites for the management of tropical forest resources, actions for the management of tropical forest resources. Landuse planning, forest resources management and its application.

Unit II

System of forest management: High forest system, clear felling shelterwood and selection system, coppices, simple coppices, Coppices with reserve, coppices with standard, Coppices with selection system.

Unit IV

Advances in resource assessment: Introduction to the use of aerial photographs for the purpose of forest inventory. The aerial photographs and its features, kinds and size, flight line and side lap drift crab and tilt, scale of photograph, photographic paper film and filters, the stereoscopic effect - instruments for study, interpretations of forestry details on aerial photographs. Identification of species, measurement of tree high, measurement of crown diameter, estimation of area, estimation of growing stock, use in forest inventory, role of aerial photograph in forest resources survey.

Practical: BHW

Based on the theory paper (Unit 2 & 5) theory and practical will be completed in Department of geography, NEHU, Shillong campus/or at DehraDun.

Suggested Readings:

1. Hainsdejk, D.(1987) Forest a sseessment, Suman Book Publication, New Delhi.
2. Jerram, (1980) A Text Book on Forest management: int.Book Distributor, DehraDun.
3. Maslekar, A.R.(1985) Aerial photography in landuse and Forest survey. Bishan Singh, Ma hendra Pal Singh Publication, Dehra Dun.
4. Mathur, V.P.(1985) Forest Management, Natraj publication, Dehradun.
5. Pant, M.(1989) Forest economics and evaluation, Natraj publication, Dehradun.
6. Ram Prakash (1986) Forest Management, Intl.Book Distributor, Dehradun.
7. Sharma, P.K.(1990) Forest Resources and their utilisation in India, Natraj publication, Dehradun.
8. Tomer, M.S.(1974) Aerial photography in landuse and forest survey, Natraj publication, Dehradun
9. Troup, R.S.(1966) Silviculture system, Bishan Singh & Mahendra Pal publication, Dehradun.

FOR(F.M.) 516 : FOREST CONSERVATION: FORMULATION AND
MANAGEMENT OF FORESTRY PRODUCTS:

Credit - 2
 Marks -50 (T)
 Lectures - 25 (T)

Unit I

Introduction and characteristics steps in project formulation. Project appraisal, objects of economic analysis of benefits and costs. Size of the project.

Unit II

Project ma nagement and its functions, case studies in cost benefit analysis and its limitations, example of case studies in man made forestry.

Unit III

Economic analysis of forestry projects, example of casestudies, (I) Village fuelwood plantation, (ii) Agroforestry systems.

Unit IV

Introduction to designing, planning and financing of tree projects by the National Wasteland Development Board, guidelines for fina ncial farm forestry scheme.

Suggested Readings:

- 1.. Charwal, G.R.(1982) Environmental analysis, Suman Book House, New Delhi.
2. Dauglas, F.W.(1982) Forest farming prosperity of India, Suman Book House, New Delhi.
3. Pultaswamiah(1987) Guide to practical project appraisal, Natraj publication, Dehradun.
4. Putterswamiah(1987) Project evaluation criteria and cost benefit analysis, Natraj publication, Dehradun.
5. Rao, S.(1987) Human resource management and environment, influence, Chugh publication, Allahabad.
6. Sharma, L.C. (1980) Forest economics planning and management, Bishan Singh & Mahendra Pal Singh publication, Dehradun.
7. Swarup, R.(1987) Management of Social Forestry, Suman Book House, New Delhi.

FOR.(F.M.) 517 FIELD STUDY : MANAGEMENT OF FOREST

Credits - 4
Marks -100

Working plan theory of exercise will be conducted in any forest area of North Eastern State (15 days camp in Forest area).

FOR.(F.M.) 518 RESEARCH PROJECT

Credits -12+4=16
Marks- 300+100=400

The course aims and giving practical training to the student related to problems of forest management. The course gives an opportunities to the students to apply all the theoretical principles of forest management. The course has total 16 credits. 14 in M.Sc. thesis and 2 credits in seminar and viva-voce exam. 16 credits are divided in to third and Fourth semester (FOR(F.M.) 515+ 518).

5:2:2:(1)

- (ii) Detailed Course outline in respects of the papers on VI Teaching of health and physical Education.

The Syllabus for the B.Ed was approved by the Academic Council in its meeting held on 7th and 8th December, 1992. However the detail Course outline in respect of 2 papers under papers VI could not be included in the revised syllabus. The syllabus of one of the papers as approved by the Board of Under-Graduate Studies is now enclosed at Annexure-'A' for consideration of the Council.

B. Ed PAPER VI (X)TEACHING OF HEALTH AND PHYSICAL EDUCATIONOBJECTIVES:

- (i) To make the student teacher aware of the need and significance of health and physical education in secondary School curriculum.
- (ii) To develop the skills in organising school health and physical education programmes.
- (iii) To acquaint them with the methods of teaching and evaluation in health and physical education.

UNIT I : Concept of Health and Health Education

- (a) Dimensions of health : Interrelationships of physical, mental and social aspects.
- (b) Importance of health Education in Schools : Aims, values and principles of teaching health education, learning outcomes.
- (c) Psychological basis of health education.
- (d) Systems of medicine available in our country : Ayurvedic, Homeopathic, Allopathic, Unani.

UNIT II: Growth, Development and Nutrition.

- Body system : their functions and care (digestive, respiratory and excretory)
- Nutritional needs of the body.
- Nutritive value of locally available foods, concepts of balanced diet.
- Diet planning for school going children.
- Malnutrition- causes, health problems related to malnutrition.

UNIT III: Environment and Health Hazards

- Environmental consciousness, Sanitation, Need for environmental cleanliness for health promotion and prevention of sickness.
- Pollution-Air, Water, Soil, Noise, Radio-activity
- Drugs and drug abuse, communicable diseases, endemic diseases-preventive measures.
- National health programmes-health services, family welfare services.

Contd/..../-

UNIT IV : Organization of school health programme

- Aspects of School health
- (a) healthful school environment.
- (b) school health services including First-Aid and safety measures.
- (c) health instruction: role and responsibility of teacher in school health programme.

UNIT V : Concept of Physical Education

- Meaning, objective and components of physical education: development of physical, and motor fitness, strength, endurance, speed, flexibility, precision and accuracy.
- Classification of physical education activities, programme of physical education in schools : Core programme and optional programmes.
- Traditional sports and games practiced in the region.

UNIT VI : Organization and Administration of Physical Education Programmes in Schools.

- Planning and organization of physical education activities playfield, courts, equipment, gymnasium, etc.
- Planning sports competition in schools- intramurals and extramurals.
- Officiating and coaching of sports activities in schools.
- Role of physical education teacher.

UNIT VII: Methods of Teaching and Evaluation in Health and Physical Education.

- Interdependence of health education and physical education.
- Methods of teaching- Lecture method, Demonstration method, Discussion method, Project method, Whole method, Field practice and field trips.
- Uses of audio-visual aids
- Lesson planning
- Evaluation: Purpose of evaluation, techniques of evaluation- tests and measurements.

Contd/.../-

REFERENCES:

1. CBSE & NCERT, Kendriya Sangathan - Health-Text Book for Secondary Schools.
New Delhi.
2. J. B. Teng, Scholar Publishing - Health Education Bks. VII & VIII.
House New Delhi.
3. Ministry of Education, New Delhi - Report of the Education Commission
1964 - 66, School Curriculum,
Physical Education nn. 8. 88-9. 93.
4. Ministry of Human Resource Devnt. - National Policy on Education-1986,
(Education Deptt.), New Delhi. Sports & Physical Education nn. 8.
20-21.
5. Hurlock, Elizabeth. - Developmental Psychology New Delhi:
Tata McGraw Hill.
6. Barnes. - Introduction to physical Education.
7. Saunders. - Principles of Physical Education.
8. Y.M.C.A. - Rules of Games and Sports (Revised
Ed.)
9. Meghalaya Board of School Education. - New Curriculum and Syllabi for
Secondary Schools.
10. Kamallesh, M. L. - Psychology in Physical Education and
Sports Delhi : Metropolitan Book
Co; 1988.

5:3:1(1)

5:3- Research.

Exemption of University employees from the bar to undertake employment while pursuing research for the Ph.D Degree.

The existing provisions of Clause 8(a) of Ordinance OC-4 on the Ph.D programme reads as follows :-

" 8. Before completing the minimum prescribed in Clause 7:1, no scholar -

(a) shall undertake employment;

Provided that those engaged in teaching and research in the affiliated Colleges of this University and other institutions recognised for this purpose by the University may be exempted from this Requirement;"

The Board of Research Studies in Sciences in its meeting held on 24.4.93 observed that as per the above provision, employees of this University pursuing research in the University Departments are not exempted from the bar to undertake employment implying that such employees are required to take leave from their duties for a minimum period of 4 years for their research leading to the Ph.D Degree. The Board decided that the exemption as allowed to employees of affiliated colleges and other recognised institutions, should also be allowed in respect of employees of the University.

The matter is placed before the Council for consideration.

5:3:2(1)

**Delay in Provisional Registration -
proposal for relaxation of the stipulated
period for submission of Thesis.**

The Board of Research Studies in Sciences in its meeting held on 24.4.93 considered the cases of some Candidates of the School Board of Physical Sciences whose provisional Registration was delayed in consideration by the School Board due to the confusion that arose out of the then operation to the Revised Ordinance . The Board of Research Studies in Sciences RESOLVED that the candidates may be allowed to submit their theses without waiting for the stipulated period of two years from the date of provisional registration subject to the satisfaction of the Vice-Chancellor that these candidates would have completed two years of study had the new Ordinance for registration been implemented.

Clause 6 of the existing Ordinance OC-4 read as follows :

"No Scholar shall be permitted to submit the thesis for the Ph.D Degree, unless he has pursued a course of research at the University for not less than two years from the date on which his candidature has been provisionally registered."

The matter is placed before the Council for consideration.

5:5- Exemination matters -

(i) Fixation of rate for various application forms.

The Examination Department issues various application forms without any cost, i.e. Degree application form, registration form, Migration form, etc. and the same are supplied to all the colleges affiliated to this University and to individuals for which the University spends considerable amount for printing of these forms. The demand for such forms are always inflated as so far they are given free of charge.

With a view to avoid such wastage of forms, it is proposed that a nominal fee for each kind of form be charged at the rates shown below.

- | | | | |
|--|---|--------|----------|
| 1) Application form for registration | @ | Rs 1/- | per form |
| 2) Application form for Migration | @ | Rs 1/- | " |
| 3) Application form for Degree Certificate | @ | Rs 1/- | " |
| 4) Permission form for Private Candidates' PU/BA | @ | Rs 5/- | " |
| 5) Application form for Re-evaluation. | @ | Rs 1/- | " |
| 6) Application form for Duplicate mark-sheet | @ | Rs 1/- | " |
| 7) Application form for Provisional Certificate | @ | Rs 1/- | " |
| 8) Application form for Rank Certificate | @ | Rs 1/- | " |
| 9) Application form for Duplicate Admit Card | @ | Rs 1/- | " |

The matter is placed before the Academic Council meeting for consideration.

5:6:1(1)

5:6- Establishment of new Department/Centres/Courses.

Proposal of the Centre for Literary and Cultural Studies for starting a Certificate and Diploma Course in Folkloristics

The proposal of the Centre for starting a Certificate and Diploma Course in Folkloristics was placed in the 44th meeting of the Academic Council held on 7.8.92 but was referred back to the Centre for recommendations by the Advisory Committee and School Board. Now, the Advisory Committee in its meeting held on 22.4.93 and the School Board of Social Sciences held on 23.4.93 respectively recommended that the proposal may be placed to the Academic Council for its consideration and approval. Extracts of the recommendations of the School Board and Advisory Committee are reproduced below:

School Board

" The CLCS Advisory Committee in its meeting held on 22.4.93 approved the Certificate and Diploma Course structure in Folkloristics. The Syllabi was earlier approved by the School Board and then recommended for its approval by the Academic Council. But the Academic Council in its meeting on 7th August '92 had suggested that the course be sent back to the School Board after its scrutiny by the Advisory Committee and then recommend to the Academic Council. The Board therefore, recommends its acceptance by the Academic Council at its next meeting."

Advisory Committee

"Decided that the Course contents for the Certificate and Diploma Course in Folkloristics as prepared by an Expert Committee and subsequently approved by the Steering Committee of CLCS and the School Board of Social Sciences, be approved and recommended to the Academic Council for its consideration and approval. Further decided that since the School Board has already approved the course, it can now be sent to the School Board as a reporting item with the information the Advisory Committee has approved the Course."

The proposal for Certificate and Diploma Course in Folkloristics is placed at Annexure-'A' for consideration of the Council.

CENTRE FOR LITERARY AND CULTURAL STUDIES
NORTH-EASTERN HILL UNIVERSITY

PROPOSAL FOR
CERTIFICATE AND DIPLOMA COURSE IN FOLKLORISTICS

Introduction

The Centre for Literary and Cultural Studies, NEHU, has been conducting successfully a Certificate Course : Folkloristics (One Semester Course - approved by the Academic Council in 1987) since 1988. Student response to the course has been quite encouraging. Keeping this in view the Advisory Committee of the Centre decided to recommend the upgrading of the existing Certificate Course to a Diploma Course. The Steering Committee of the Centre subsequently constituted a Course-Drafting Committee with three experts and the faculty members of CLCS. The experts were Prof. Birendranath Datta of the Deptt. of Folklore, Gauhati University, Dr. Jawaharlal Handoo of the Folklore Unit of Central Institute of Indian Languages, Mysore and Prof. J.B. Bhattacharjee of the Deptt. of History, NEHU. The Drafting Committee met on 2 April 1992 and prepared the Course structure (appended to this note) which was subsequently approved by the Steering Committee in its meeting on 1 May, 1992.

Objective

Folkloristics is the scientific study of folklore. It includes more than simply the collection of tales etc. and antiquarian reporting. It has now grown to be a rigorous intellectual discipline that includes application of theory and method to the study of material of folklore.

With appropriate scholastic training in theory and methods of folkloristics, a scholar can contribute, through research on folklore, to studies in other social science disciplines, such as History, Anthropology, Philosophy. The literary potential of folklore studies has long been accepted and many of the language departments of Indian Universities have included local folk literature in their syllabi. Its potential for use in studying social formations is also being increasingly recognised.

In North-East India with its rich folk cultural heritage, such a course is deemed to be worthwhile in studying indigenous literatures and culture. It is also expected to help in generating an awareness among students and scholars about the cultural heritage and true history of the people of the region.

Keeping this in view, the Centre for Literary and Cultural Studies proposes to follow up the existing Certificate Course with a Diploma Course in Folkloristics. The course will provide enhanced perspective in the scientific study of the folklore material with exposure to concepts and methods and familiarise the students with the rich treasure of folklore materials of North-East India.

Pattern

The course will be a one year course divided into two semesters. The 4 courses offered in the first semester will lead to a Certificate and completion of the first part of the Diploma Course. Successful candidates in the first semester examination will be eligible for Part II of the Diploma Course conducted in the second semester which will lead to the award of Diploma in Folkloristics. The entire course of eight papers have therefore been divided into two parts - 1st and 2nd semester with four papers in each of the two semesters.

Eligibility

Any student with a Bachelor degree will be eligible for offering the course. Preference will, however, be given to students with degree in social science disciplines and languages.

CENTRE FOR LITERARY AND CULTURAL STUDIES
NORTH-EASTERN HILL UNIVERSITY

CERTIFICATE AND DIPLOMA COURSE IN FOLKLORE

FIRST SEMESTER

CERTIFICATE COURSE AND DIPLOMA COURSE (PART I)

COURSE 1

: INTRODUCTION TO FOLKLORE

Objective

The course will initiate the students to the theories and methods of the Science of Folklore.

Contents

: 1. What is Folklore 2. Folklore and Folklife
3. Four Sectors of Folklore . Functions
5. Course and Forms of Folklore 6. Major Theories and Methods.

COURSE 2

: FOLKLORE AND RELATED DISCIPLINE

Objective

: The course will familiarise the students with the relationship Folklore shares with related disciplines.

Contents

: 1. Folklore and Literature 2. Folklore and Anthropology 3. Folklore and Psychology
4. Folklore and History 5. Folklore and Archeology 6. Folklore and Linguistics.

COURSE 3

: FOLKLORE OF NORTH-EAST INDIA

Objective

: This course will familiarise the students with Folklore materials of North-East India and studies made.

Contents

: 1. Status of Folklore studies in North-East India.
2. Collected folklore materials
3. Folk Literature 4. Folk Art
5. Folk Festivals and Rituals.

COURSE 4

: FIELD TECHNIQUE

Objective

: This course will familiarise the students with the general techniques of field methods.

Contents

: 1. Collection 2. Classification 3. Processing 4. Indexing 5. Reporting
6. Application of Modern Technology in the collection, documentation and archiving of Folklore data.

5:6:1:(5)

SECOND SEMESTER

DIPLOMA COURSE PART II

COURSE 5

: FOLKLORE THEORIES AND METHODS

Objective

: This paper will lead the students to the understanding of major theories and methods.

Contents

: 1. Historical - Geographical Method or Comparative Method 2. Functional Theory 3. Psycho-analytical theory 4. Structural analysis- Proppien Model and Levi-Straussian Model 5. Performance-Semiotic Theory.

COURSE 6

: FOLKLORE OF NORTH-EAST INDIA - II WITH SPECIAL REFERENCE TO MEGHALAYA, MIZORAM AND NAGALAND.

Objective

: This course will familiarise the students with the Folklore material of Meghalaya, Mizoram and Nagaland.

Contents

: 1. Folklore and Folklife 2. Collected Genres 3. Literary Types 4. Other Types 5. Studies made.

COURSE - 7

: INTRODUCTION TO INDIAN FOLKLORE

Objective

: This course will familiarise the students with the special characteristics of Indian Folklore and Oral tradition.

Contents

: 1. Growth and Development of Folklore Studies in India 2. Special Generic qualities of Indian Folklore materials 3. Folk Epic Folk tales and Oral poetry 4. Folk art 5. Folk performing Arts.

COURSE - 8

: FOLK PERFORMING AND VISUAL ARTS OF NORTH-EAST INDIA.

Objective

: This course will lead the students to the understanding of the specific performing arts and folk arts and crafts of the region.

Contents

: 1. Selected performing arts of the states of the region-important dances or dramas.
2. Selected arts and crafts of all the states
3. bamboo drafts 4. wood-carving 5. weaving
6. terracotta etc.

N.B. FULL MARKS FOR EACH PAPER - 100 TOTAL - 800

READINGSCOURSE 1 : Introduction to FolkloristicsSelect Readings

- | | |
|-------------------------|--|
| 1. K. Clarke & M. Clark | <u>Introducing Folklore, 1970</u> |
| 2. M.S. Edmonson | <u> Lore : An Introduction to the Science of Folklore, 1976</u> |
| 3. David Laubach | <u>Introduction to Folklore, 1980</u> |
| 4. J. Handoo | <u>Folklore: An Introduction, 1989</u> |
| 5. Maria Leach | <u>Standard Dictionary of Folklore, Mythology and Legend, 1999</u> |

Additional Readings

- | | |
|----------------------|--|
| 6. A. Krappe | <u>The Science of Folklore, 1970</u> |
| 7. Richard M. Dorson | <u>Folklore and Folklife : An Introduction, 1980</u> |

COURSE 2 : Folklore and Related DisciplinesSelect Readings

- | | |
|--------------------|---|
| 1. V. Propp | <u>Theory and History of Folklore, 1984</u> |
| 2. M.J. Herskovits | <u>Cultural Anthropology, 1955</u> |
| 3. M. Islam | <u>Folklore : The Pulse of the people, 1980</u> |
| 4. Alan Dundes | <u>The Study of Folklore, 1965</u> |
| 5. Alan Dundes | <u>Varia Folklorica, 1978</u> |

Additional Readings

- | | |
|-----------------------------|--|
| 6. Alan Dundes | <u>Interpreting Folklore, 1980</u> |
| 7. Alan Dundes (Ed) | <u>Sacred Narrative, 1982</u> |
| 8. Joseph Campbell | <u>Masks of God, 1969</u> |
| 9. Lauri Honko (Ed) | <u>Tradition and Cultural Identity, 1988</u> |
| 10. Degh, Glassei and Diras | <u>Folklore Today, 1989</u> |

COURSE 3 : Folklore of North-East IndiaSelect Readings

- | | |
|--------------------|---|
| 1. P. Goswami | <u>Essays in Folklore and Culture of N.E. India, 1987</u> |
| 2. Soumen Sen (Ed) | <u>Folklore in N.E. India, 1985</u> |
| 3. S.N. Barkataki | <u>Tribal Folktales of Assam, 1965</u> |
| 4. P. Goswami | <u>Ballads and Tales of Assam, 1960</u> |
| 5. V. Elwin | <u>Myths of N.E. Frontier of India, 1958</u> |

Additional Readings

6. M. Brahma Folk Songs of the Bodos, 1960
7. T.K. Niyogi Folktales and Myths of Khasi and Tripuri Communities, 1975
8. B. Datta (Ed) A handbook of Folklore Material of N.E. India, 1991
9. H. Kamkhenchang Maram Folktales, 1985
10. H. Kamkhenchang Folktales of Moyon-Monsang, 1982
11. P. Goswami Songs and Tales of North-East India, 1976
12. B. Datta Bibliography of Folklore Materials of Assam and Adjoining Areas, 1978
13. Folklore Sections of the Monographs on the major tribes of N.E. India.

COURSE 4 : Field TechniqueSelect Readings

1. Richard M. Dorson (Ed) Folklore and Folklife : An Introduction, 1980
2. K.S. Goldstein A Guide for Field Workers in Folklore, 1964
3. K. Clarke & M. Clarke Folklore Reader, 1969
4. W.E. Richard Studies in Folklore, 1971
5. B. Jackson Field Work, 1987

Additional Readings

6. P. Bartis Folklife and Field Work, 1979
7. P.V. Young Scientific Social Surveys and Research

COURSE 5 : Folklore Theories and MethodsSelect Readings

1. Richard M. Dorson Folklore : Selected Essays 1972
2. Richard M. Dorson (Ed) Folklore and Folklife : An Introduction, 1980
3. Alan Dundes (Ed) The Study of Folklore, 1965
4. Alan Dundes Essays in Folkloristics, 1978
5. Alan Dundes Interpreting Folklore, 1980

Additional Readings

6. Alan Dundes Analytic Essays in Folklore, 1975
7. William R. Bascom Contributions to Folkloristics, 1981

- | | |
|---------------------------|--|
| 8. Dan Ben - Anos | <u>Folklore in Context, 1982</u> |
| 9. J.Handoo | <u>Folklore : An Introduction, 1989</u> |
| 10. J.Handoo | <u>Currents Trends in Folkloristics 1978</u> |
| 11. V.Propp | <u>Theory and History of Folklore, 1984</u> |
| 12. V.Propp | <u>Morphology of Folktale, 1958</u> |
| 13. Levi-Strauss | <u>Structural Anthropology, 1969</u> |
| 14. Stith Thompson | <u>Motif Index (6 Volumes), 1959</u> |
| 15. Degh, Glassei & Linas | <u>Folklore Today, 1991.</u> |

COURSE 6 : Folklore of North-East India -II with special Reference to Meghalaya, Mizoram and Nagaland

Select Readings

- | | |
|------------------|---|
| 1. I.M.Sinon | <u>Khasi Tales and Beliefs, 1966</u> |
| 2. Mrs. Rafy | <u>Khasi Folktales, 1920</u> |
| 3. R.Luikhan | <u>Folktales of Nagaland</u> |
| 4. D.S.Rongmuthu | <u>The Epic Lore of the Garos, 1967</u> |
| 5. D.S.Rongmuthu | <u>Garos Folktales, 1967</u> |

Additional Readings

- | | |
|--|---|
| 6. H.Bareh | <u>Khasi Fables and Folktales, 1971</u> |
| 7. H.Bareh | <u>A Short History of Khasi Literature, 1962</u> |
| 8. H.Bareh | <u>History and Culture of Khasi people, 1967</u> |
| 9. N.Shadap Sen | <u>The Origin and Early History of Khasi-Synteng people, 1981</u> |
| 10. Soumen Sen | <u>Social and State Formation in Khasi-Jaintia Hills : A Study of Folklore, 1985.</u> |
| 11. M.S.Sangma | <u>History of Garo Literature, 1989</u> |
| 12. J.P.Mills | <u>Folk Stories of Lhota Nagas</u> |
| 13. S.Arockianathan | <u>Thangkul Folk Literature, 1975</u> |
| 14. Folklore Sections of the Monographs on the Khasis, the Garos, the Lushai- Kukia, Ao, Lhota, Sema, Kengna, Angami Konyak Nagas. | |

contd...../.....

5:6:1:(9)

COURSE 7 : Introduction to Indian Folklore

Select Readings

1. M. Islam : History of Folklore Collections in India, Bangladesh/Pakistan, 1982
2. Alan Dundes (Ed) : Varia Folklorica (V.P.Vidyarthi's Chapter on Indian Folklore), 1978
3. J. Handoo : Folklore : An Introduction (Relevant Chapter), 1989
4. Blackburn and Ramanujan : Another Harmony, 1986
5. Claus, Handoo and Pattanayak : Indian Folklore I & II, 1987

Additional Readings

6. Beck, Claus, Goswami and Handoo : Folktales of India, 1987
7. Peter Claus and Frank Korom : Folkloristics and Indian Folklore, 1988
8. Hemango Biswas (Ed) : Folk Music and Folklore, 1967
9. Kapila Vatsyayan : Traditional Indian Theatre : Multiple Streams, 1980
10. Kapila Vatsyayan : A Study of Some Traditions of Performing Arts in Eastern India, 1981
11. M. Miri (Ed) : Arts and its Appreciation, 1989
(Soumen Sen's) Chapter on Folk Art and Craft
12. Balwant Gargi : Indian Folk Theatre, 1975
13. Enekshi Bhabnani : Folk and Tribal Designs of India, 1976
14. Appadorai, Korom and Mills : Gender, Genre, and power in South Asian Expressive Traditions, 1991

COURSE - 8 : Folk Performing and Visual Arts of N.E. India

Select Readings

1. Kapila Vatsyayan : A Study of Traditions of Performing Arts of Eastern India, 1981

CONF...../.....

2. B.Datta (Ed) Traditional Performing Arts of N.E. India, 1990.
3. Hamlet Barih Art History of Meghalaya, 1991
4. J.N.Chowdhury The Khasi Canvas, 1978
(Relevant Chapter)
5. Aditi Shirali Textile and Bamboo Crafts of the North-Eastern Region, 1983

Additional Readings

6. A.Ao Arts and Crafts of Nagaland, 1968
7. Verrier Elwin The Art of North-East Frontier of India
8. Datta and Duara (Ed) Handicrafts of Arunachal Pradesh
9. Chapters on Art and Craft of the Monographs on the Tribes of N.E.India.

5:8:Others -

5:8:1(1)

Implementation of Five-Days week in the University- Item endorsed by the Executive Council.

The agenda item as per Annexure I proposing for implementation of five Days week, was placed before the Executive Council in its 78th meeting held on 30.3.93.

The Executive Council considered the proposal and resolved that since this would affect the teaching in the Departments, the matter may be discussed first in the Academic Council and there after be placed before the Executive Council.

The matter is therefore placed before the Academic Council for consideration.

5:8;1(2)

5:8 - Others -

ANNEXURE - I

(i) Implementation of Five-Days Week in
the University and Colleges.

The matter of Implementation of five-days week in the University has been placed before the Executive Council in its 62nd meeting held on 7th September 1988. The decision of the E.C. is at Annexure A.

The subject again came up for discussion in the Joint Consultative Council in its meeting held on 12th Nov. 1992. The decision of the Council is at Annexure B.

Since the earlier decision of the Executive Council, there has been certain changes in the University including the important aspect of the shifting of the administrative offices to the Campus. Because of the distance between the Campus and the teaching Departments there has a very great pressure on the transport system of the University so much so that most of the vehicles are on the verge of breaking down. If the Saturdays can be made off days, the break will provide respite to the vehicles for servicing and maintenance.

It is also learnt that the subject came up for discussion in the Meghalaya Assembly and a decision to implement five-days week in Meghalaya is likely to be taken.

The loss of working hours in the University and Constituent Colleges can be made up by increasing one lecture period on each working days.

The uniformity of working days for the administration and teaching departments will also remove the inconvenience faced by the teaching departments in the absence of the Officers and Staff on Second Saturday in the present system.

The matter is placed before the Council for its consideration.

5:8:1:(2)

Annexure 'A'

EXTRACT OF THE MINUTES OF THE SIXTY SECOND MEETING OF THE EXECUTIVE COUNCIL HELD ON WEDNESDAY, THE 7TH SEPTEMBER, 1988.

5:8 - Others -

(i) Introduction of 5 day week -

No:EC:62:88:5:08:(i) - The Council considered the contents of the letter No.F.1-41/85(NP-I) dated the 11th August, 1988 received from the University Grants Commission regarding the introduction of 5 day week and noted that option had been given to the Central Universities to decide on the matter on their own. The Council, after due consideration, RESOLVED that the existing arrangement may continue in North-Eastern Hill University.

Identification of the allied/cognate subjects for the Department of Forestry for composition of the Board of Post-Graduate Studies.

Under Clause 1(iv) and (v) of Ordinance OA-8 on the Board of Post-Graduate Studies, the composition of the Board of Post-Graduate Studies includes one teacher each from other Department having common courses within the School and two teachers from allied and cognate subjects. Such Department/subjects are spelt out in Table 'A' and 'B' following Regulations 1 of Ordinance OA-8.

The Common/allied and cognate subjects in respect of the Department of Forestry are yet to be included in the Tables. The following Department/subjects have been approved by the School Board of Environmental Sciences for the Department of Forestry.

Common Courses within the School (for inclusion in Table 'A')

1. Geography
2. Geology

Allied/Cognate subjects in other School (for inclusion in Table 'B')

1. Botany
2. Eco-Development
3. Soil Conservation.

The Common courses/allied and cognate subjects as stated above for the Department of Forestry are submitted for consideration of the Council. If approved the Courses and subjects will accordingly be included in the Two Tables of the regulation OA-8/R-1. It may be mentioned that the Board of Post-Graduate Studies has already been constituted taking the above Departments as allied cognate subjects.

The matter is placed before the Council for consideration.

5:8:3(1)

Proposal for reservation of seats in each Post-Graduate Department for Children of employees with All India Transfer liability and non-residents.

A letter was received from the University Grants Commission requesting the University to take suitable action for reservation of seats in the Post Graduate Departments for Children of employees with All India Transfer liability and non-residents.

The UGC letter No.F.1-84/92(CPP-2) dated 6.1.93 is placed at Annexure - A for consideration of the Council.

5:8:3(2)

COPY

Annexure - A

GRAMS UNIGRANTS
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

Dr. P.B.Tripathy,
Joint Director,
Tel.No.3716346

D.O.-No.F.1-84/92(CPP-2)

December, 1992

- 6 JAN 1993.

Dear Vice Chancellor

You will be happy to know that as per the information conveyed by the Secretary, Andhra Pradesh State Council of Higher Education, Andhra University has been providing one seat in each subject in each department for the candidates outside the State under the National Integration Quota. You will agree that this is a laudable scheme towards National Integration.

It may be pertinent in this context to bring it to your kind notice that the programme of action on National Policy on Education (as revised in 1992) also recommended that UGC and state Governments should encourage universities to provide for an additional ten percent seats on a supernumerary basis in each postgraduate department for children of employees with all India transfer liability and non-residents.

You may, therefore, initiate suitable action on similar lines as that of Andhra University and also keeping the recommendations of NFP 1992 in view.

With regards,

Yours sincerely,

Dr. Barrister Pakem,
Vice-Chancellor,
North-Eastern Hill University,
Shillong. 793 001.

Sd/-(P.B.Tripathy)

~~5:8: Academic Matter-others.~~

Item No Donation of Rs.15,000/- by the President of India for instituting an award " The President of India Dr.Shankar Dayal Sharma Gold Medal " .

The President of India has donated a sum of Rs. 15,000/- (fifteen thousand) to this University to make an endowment for the award of a gold medal styled " the President of India Dr.Shanker Dayal Sharma Gold Medal " . The above amount is required to be placed in a fixed deposit with the interest accruing thereon be utilised for award of gold medal to a student adjudged the best for general Proficiency including character and conduct and excellence in academic performance, extra curricular activities and social service. Accordingly Bank draft No.128451, dt.30.3.93 was transmitted to finance for necessary action.

It may be stated for the information of this council that to regulate this award certain precedural norms will have to be formulated and the Vice-Chancellor has approved the constitution of a Committee to be processed by the Controller of Examination. The Committee shall comprise of all Dean of the Schools, Dean Students' Welfare and co-ordinator NSS as members and the senior most Dean shall be the Chairman of the Committee.

For the award, it may be suggested for favour of consideration on the Council, that it would be more appropriate to award the medal from amongst the Post-Graduate Students of NEHU. only and the Gold Medal for this purpose is to be entrusted with the COE. and award of the same be done at the Ceremony of the University Convocation.

The copy of the letter from Shri.G.B.Pradhan Director, President of India, Secretariat is enclosed at Annexure - A for favour of perusal.

The Agenda note is thus placed to the Academic Council for approval.

EMBLEM DIRECTOR

REGISTERED/A.D.
President's Secretariat
Rashtrapati Bhavan
New Delhi - 110 004

F.No.I/1.2/93-Wel

30th March, 1993.

Sir,

I am directed to inform you that the President of India has been pleased make an endowment of Rs.15,000/- (Rupees fifteen thousand only) to the North Eastern Hill University.

2. As desired by the President, the above mentioned amount be placed in fixed deposit with the interest accruing thereon being utilized for the award of a gold medal, styled "The President of India, Dr. Shanker Dayal Sharma Gold Medal" to a student adjudged the best for General Proficiency: including character and conduct and excellence in academic performance, extra curricular activities and social service.

3. Accordingly, the above mentioned amount is being remitted to you by Bank Draft No.128451 dated 30.3.1993 drawn on Shillong. On receipt of the amount, the attached receipt duly signed may please be returned in token of your having received the amount.

Yours faithfully,

Sd/-

(G.B. PRADHAN)

The Vice-Chancellor,
North Eastern Hill University
Shillong.

6:6:1(1)

6:6 - Service Conditions etc.

Partial modification on the minimum qualification prescribed for appointment of Lecturers

The University Grants Commission had decided that all those candidates who have secured 55% marks at Master's Degree level may be exempted from appearing in the 'eligibility test for Lecturership' for the recruitment of Lecturers in the Universities and colleges provided :-

1. All candidates have passed UGC/CSIR JRF examination.
2. All candidates have already been awarded Ph.D. degree.
3. All candidates have already been awarded M. Phil degree upto 31st March 1991.

The above decisions have already been considered and adopted by the Academic/Executive Council.

The U.G.C., in addition to above, further decided that the candidates securing 55% marks at Master's Degree level and those who will submit their Ph.D. thesis upto 31.12.93 would also be exempted from appearing in the eligibility test for the recruitment of Lecturers in the University and colleges. The circular issued by the Commission to this effect may be seen at Annexure 'A'.

The matter is placed before the Council for information and adoption.

6:6:1(2)

ANNEXURE 'A'

C O P Y

UNIVERSITY GRANTS COMMISSION
NATIONAL EDUCATIONAL TRAINING
F-48, SOUTH EXTENSION PART I
NEW DELHI 110 049

No.F.4-12/86(NET)

10th February, 1993.

C I R C U L A R

The University Grants Commission has decided that all those candidates who have secured 55% marks at Master's degree level may be exempted from appearing in the 'eligibility test for Lecturership' for the recruitment of Lecturers in the Universities and colleges provided :-

1. All candidates who have passed UGC/CSIR J.R.F. Examination.
2. All candidates who have already been awarded Ph.D. degree.
3. All candidates who have already been awarded M.Phil degree upto 31st March, 1991.
4. All candidates who will submit their Ph.D. thesis upto 31st December, 1993.

The above circular is in partial modification of all those circulars issued by the commission in this respect from time to time.

Sd/-
(N.K. Jain)
Deputy Secretary.

Copy forwarded to the Registrars of all the Universities with a request for circulation to the colleges concerned.

Annexure A for 5:5:2(3)

B.Sc. Home Science

General

	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>
<u>Elective I</u>	Chemistry Theory - 70 Practicals: '0'	Physiology Theory - 70 Biochemistry Theory - 70 Chemistry X 30 Biochemistry X 30 Practicals X	Home Management Paper I Theory - 70 Practicals - 30 Physiology X - 30 Practicals X
<u>Elective II</u>	Textiles & Clothing Theory - 70 Practicals-'0'	Extension Education Theory - 70 Textile Clothing Theory - 70 Textile Clothing Practicals-60	Home Management Paper II Theory- 70 H.M.Practicals-30 Extension Education Practicals-30
<u>Elective III</u>	Food & Nutrition Paper I Theory - 70 Practicals-'0'	Food & Nutrition Paper II Theory- 70 Food & Nutrition Practicals - 60 Child Psychology Theory - 70	Child Development Theory - 70 C.D.Practicals 30 Child Psychology Practicals-30

Elective IV

B.Sc. Home Science

<u>MAJOR</u>		
Food & Nutrition Paper I Theory 70 Practicals-'0'	Food & Nutrition Paper-II Theory - 70 Food & Nutrition Practicals-60 Child Psychology Theory - 70 Principles of CD Theory - 70 Principles of CD Practicals - 30 F & C. Welfare Practicals - 30	Child Development Theory- 70 C.D.Practicals-30 Child Psychology Practicals-30 Mother, Child & Health & Nutrition Paper-I - 70 Paper-II - 70 Practicals - 30