



eLearning Portal

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FOURTH OPEN CALL
**COURSE
CONTENT REVIEW
OF UG E-COURSES**

NAHEP Component 2A Project

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Investments in ICAR Leadership in Agricultural
Higher Education Component-2, NAHEP

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Fourth Call for Review and Finalization of UG E-Learning Courses under NAHEP Component 2 - "Investments in ICAR Leadership in Agricultural Higher Education"

Introduction

Education Division undertakes planning, development, coordination, and quality assurance of higher agricultural education in the country, and thus, strives for maintaining and upgrading quality and its relevance. E-Learning plays a key role in delivering the quality education in a scalable and flexible manner. It is a learning system based on formalized teaching with the help of electronic resources. It is one of the most engaging ways to study today. Since the learning is conducted online, students can study at their own pace and sometimes in their own time. It allows the teachers to reach out to a larger audience of students as compared to the traditional classroom where the number of students are restricted. Thus, a large number of learners have access to learning.

Several UG level E-Course wise contents were developed in seven disciplines (viz. Agricultural Science; Fisheries Science; Dairy Science; Veterinary & Animal Husbandry; Horticulture; Home Science and Agricultural Engineering). These were developed through partnerships and efforts of the components of the ICAR-Agricultural Universities (AUs) System comprising State Agricultural Universities (SAUs), deemed to be universities (DUs), Central Agricultural University (CAU) and Central Universities (CUs) with Agriculture Faculty at SAUs and other organizations under "National Agricultural Innovation Project".

E-Learning portal under NAHEP, Indian Council of Agricultural Research provides 24x7 services for online access to all the teachers, students, and learners in the field of agricultural education. The courses then created under NAIP will be upgraded as per Fifth Dean Committee report and some new UG courses will be created under the light of NAHEP project funded by the World Bank.

Background

The mandate of ICAR/DARE includes promotion and coordination of education in agriculture, agro-forestry, animal husbandry, fisheries, home science and allied sciences in the country. ICAR, through series of efforts over years, brought about uniformity in norms and standards in academics, governance and finance management, quality and relevance of education, and policies on human resource development in the country. ICAR is now embarking upon an ambitious step in further strengthening the National Agricultural Education System in the country through National Agricultural Higher Education Project (NAHEP) with financial assistance of the World Bank by investing on infrastructure, competency and commitment of faculty, and attracting talented students to agriculture.

The Project "**Investments in ICAR Leadership in Agricultural Higher Education**" is a Component-2 NAHEP project funded by the World Bank. It belongs to the main priority area of strengthening of agricultural education system (ICAR and Agricultural Universities) in India.

The main objectives of E-Learning activity are:

- Revision of existing UG e-courses
- Development of e-courses for Under Graduates, Masters and PhD courses
- Deployment of e-courses on MOOC/LMS platform

During Oct-Dec 2019, First Open Call was conducted for inviting the applications for creation of e-content for PG Courses. Under the first call, we invited the applications from permanent teaching faculty of 45 agricultural universities to create content for 144 PG courses.

Thereafter, Second Open Call was carried out in the month of May'2020 for the up-gradation (as per Fifth Dean Committee report) of already existing Under-Graduate e-courses & creation of some new UG courses, where faculty from across the 74 agricultural universities in India were invited

In Continuation with First Open Call, we declared Third open call in the month of December'2020 for inviting the applications faculty from the 74 agricultural universities in India, for leftover PG courses offered in call 1.

Fourth E-Learning Call

The Fourth Open Call is meant for inviting the applications from permanent teaching faculty at Agricultural Universities and ICAR deemed universities/ ICAR institutes with at-least 5 years of experience in teaching/ research, for reviewing the Under-Graduate e-courses. In this Call, a few of the already created UG E-Courses as per fifth dean committee will be reviewed and finalized. The open courses are mentioned in Annexure-VIA & VIB. The syllabus for the courses is as per the prescribed UG curricula and syllabi of the Education Division, ICAR, New Delhi. Applications are invited online from permanent teaching faculty across AUs with at least 5 years of experience in teaching/research to review Undergraduate courses from all Agricultural Universities and ICAR deemed universities. The Course Structure and format for reviewing the E-Learning content and the Honorarium is given below. Interested faculty can apply online using E-Learning Portal.

Course Structure and Format to be used for Upgrading/Creating E-Course Content

1. Course Name, University/College Name, Department Name

2. Lecture -Wise breakup of the Course. (Around 10-15 Lectures)

3. Lecture Structure:

- Objectives of the Lecture in bullets (At least 2).
- Glossary of terms: 5-10 definitions of the main terms used in each Lecture.
- E-Lecture: E-Learning content of the Lecture containing the Text, Tables and labelled Pictures (The content should be more in bulleted form or small paragraphs rather than big paragraphs).
- Questions/Answers: At least 5-10 Questions (MCQ's, True/False, Fill Ups, Long answer type and short answer type) with their options and correct answers. (all the questionnaires are mandatory). At least 1 Assignment from each Lecture.
- A power point presentation for each Lecture of the course.
- Animations/ Explanatory Video (if any)

4. Format:

1. The e-Learning content should be created in MS-Word, using the font style: Times New Roman.
2. Title of Course and Lectures should be Bold and in 14 pts font size.
3. The text should be written in 12 pts font size.
4. All topics under the Lecture should have a Bold Heading and a Section No. (1, 2, 3...)
5. Sub-sections should be numbered as 1.1, 1.1.1 etc.

Table 1.: Honorarium and Time Duration

	Honorarium	Time Duration
Content Creator/ Reviser	Rs 15000 per Course	1 Month
Course Reviewer	Rs 15000 per Course	1 Month



List of Courses to be Revised in Fourth Call

B.Sc (Agriculture)

S.No	Course
1	Agricultural Finance & Cooperation
2	Agricultural Marketing Trade and Prices
3	Elementary Mathematics
4	Livestock Production and Management
5	Post-harvest Management and Value Addition of Fruits and Vegetables
6	Principles of Seed Technology

B.Tech (Agricultural Engineering)

S.No	Course
1	Applied Electronics and Instrumentation
2	Dairy and Food Engineering
3	Drainage Engineering
4	Electrical Machines and Power Utilization
5	Engineering Mathematics - I
6	Engineering Mathematics-II
7	Food Packaging Technology
8	Heat and Mass Transfer
9	Machine Design
10	Mechanics of Tillage and Traction

B.Tech (Dairy Technology)

S.no	Course
1	Cheese Technology
2	Chemical Quality Assurance
3	Communication Skills
4	Dairy Engineering
5	Dairy Process Engineering
6	Fat Rich Dairy Products
7	Food Engineering
8	Food Technology-I
10	Heat & Mass Transfer
11	Ice-cream & Frozen Deserts
12	Instrumentation and Process Control
13	Organic Chemistry
14	Packaging of Dairy Products
15	Starter Cultures and Fermented Milk Products

B.Sc (Horticulture)

S.No	Course
1	Breeding of Fruit and Plantation Crops
2	Diseases Of Vegetable, Ornamental And Spice Crops
3	Fundamentals Of Entomology
4	Fundamentals Of Extension Education
5	Fundamentals Of Food Technology
6	Fundamentals Of Horticulture
7	Fundamentals Of Plant Pathology
8	Growth and Development of Horticultural Crops
9	Horti-Business Management
10	Nematode Pests Of Horticultural Crops And Their Management
11	Organic Farming
12	Ornamental Horticulture
13	Potato And Tuber Crops

S.No	Course
14	Principles of Plant Breeding
15	Seed Production Of Vegetable, Tuber And Spice Crops
16	Soil Fertility And Nutrient Management
17	Spices And Condiments
18	Temperate Fruit Crops
19	Tropical and Subtropical Fruits

B.F.Sc (Fisheries)

S.No	Course
1	Aquatic Ecology, Biodiversity and Disaster Management
2	Freezing Technology
3	Information And Communication Technology
4	Principles Of Aquaculture
5	Soil And Water Chemistry

B.Sc (Home Science)

S.No	Course
1	Community Nutrition
2	Fashion Illustrations
3	Food Standards And Quality Control
4	Food Toxicology
5	Housing And Space Management
6	Instructional Video Production
7	Introduction to Clinical Nutrition ~Clinical Nutrition
8	Project Management
9	Public Relations And Social Marketing
10	Women In Agriculture
11	Community Nutrition
12	Fashion Illustrations
13	Food Standards and Quality Control

List of new UG Courses to be reviewed in Fourth Call

B.Sc (Agriculture)

S.No	Courses
1.	Farm Management, Production & Resource Economics
2.	Problematic Soils and Their Management
3.	Environmental Studies and Disaster Management
4.	Introduction to Forestry
5.	Geoinformatics and Nanotechnology and Precision Farming

B.F.Sc (Fisheries Science)

S.No	Courses
1	Aquatic Ecology, Biodiversity and Disaster Management
2	Fish Canning Technology
3	Quality Assurance of Fish and Fishery Products
4	Navigation and Seamanship

B.Tech (Agricultural Engineering)

S.No	Courses
1	Theory of Machines
2	Artificial Intelligence
3	Bio-energy Systems: Design and Applications
4	Plastic Applications in Agriculture
5	Water Quality and Management Measures
6	Mechatronics

B.Sc (Home Science)

S.No	Courses
1	Diffusion and Adoption of Homestead Technologies
2	Textile Science and Fabric Care
3	Techniques of Fabric Construction
4	Food and Nutrition Policy and Agriculture

B.Tech (Dairy Technology)

S.No	Courses
1	Energy Conservation and Management
2	ICT in Dairy Industry and Introduction to Operations Research
3	Emerging Dairy Processing Technologies

B.Sc (Horticulture)

S.No	Courses
1	Agro-meteorology and Climate Change

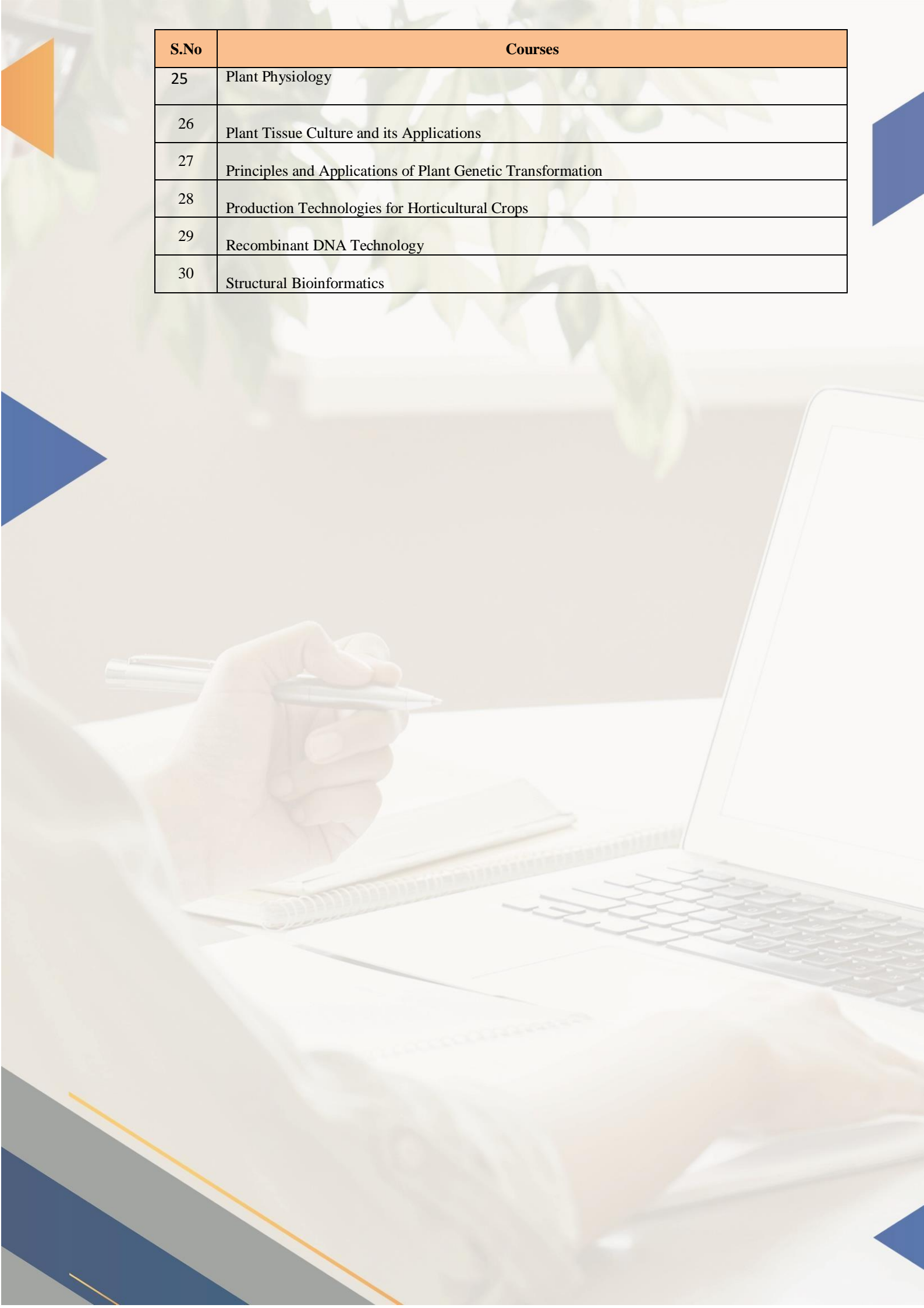
B.Sc (Forestry)

S.No	Courses
1	Wood Science and Technology
2	Agroforestry Systems and Management
3	Basic Mathematics
4	Climate Science
5	Dendrology
6	Forest Ecology and Biodiversity
7	Forest Economics and Marketing
8	Forest Management
9	Forest Mensuration
10	Forest Survey & Engineering
11	Introduction to Agronomy and Horticulture
12	Logging and Ergonomics
13	Ornithology & Herpetology
14	Plant Biochemistry
15	Plantation Forestry
16	Restoration Ecology
17	Seed Technology & Nursery Management
18	Soil Biology & Fertility
19	Statistical Methods & Experimental Designs

S.No	Courses
20	Theory and Practice of Silviculture
21	Tree Improvement
22	Wildlife Management
23	Wood Anatomy
24	Wood Products and Utilization

B.Tech (Biotechnology)

S.No	Courses
1	Animal Biotechnology
2	Basic Genetics
3	Basic Mathematics – I
4	Basic Mathematics – II
5	Basic Statistics
6	Bioinformatics Tools and Biological Databases
7	Cell Biology
8	Classical and Molecular Cytogenetics
9	Computational Biology
10	Computational Methods for Data Analysis
11	Enzymology and Enzyme Technologies
12	Food Biotechnology
13	Immunology
14	Introductory Bioinformatics
15	IPR, Biosafety and Bioethics
16	Livestock Production and Management
17	Microbial Biotechnology
18	Microbial Genetics
19	Microbiology
20	Molecular Biology
21	Molecular Breeding of Horticultural Crops and Forest Trees
22	Molecular Diagnostics
23	Molecular Marker Technology
24	Pharmacogenomics



S.No	Courses
25	Plant Physiology
26	Plant Tissue Culture and its Applications
27	Principles and Applications of Plant Genetic Transformation
28	Production Technologies for Horticultural Crops
29	Recombinant DNA Technology
30	Structural Bioinformatics