Second Open Call for Course Content Creation and Review of eLearning Courses

NAHEP Sub Project - Investments in ICAR Leadership in Agricultural Higher Education

NAHEP Component-2 announces the second eLearning open call for the Content Creation of new courses, and, Upgradation & Reviewing of already existing Under Graduate e-courses in Agriculture under the NAHEP Sub Project - Investments in ICAR Leadership in Agricultural Higher Education.

Applications are invited online from the permanent teaching faculty with at least 5 years of experience in teaching/research for Under Graduate courses from all Agricultural Universities and ICAR deemed universities. Detailed eligibility criteria is also mentioned in the portal along with the details of call 2.

Applicants can visit eLearning Portal at: https://education.icar.gov.in/elearninghomepage.aspx, and can apply online after getting themselves registered till **3rd June, 2020** for filling up applications for Content Creation, Upgradation and Review. The Nodal Officers (already nominated to interact with Education Division, ICAR) of the university shall then use the portal for application approval.

The syllabus for the courses is as per the prescribed UG curricula and syllabi of the Education Division, ICAR, New Delhi (5th Dean's Committee). The honorarium details and the structure and format of e-Courses is available on the eLearning Portal.

A humble request is made to the honorable Nodal Officer to kindly encourage their faculty to participate in this Mega e-learning activity and make the Agriculture Education more effective and accessible.

For your help and support a Reference Manual is made available on the eLearning Portal. For any queries and help, you can also contact us on nahep.comp2@icar.gov.in

Dated: 17th May, 2020

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Second Call for Revision and Creation of UG e-Learning Courses under NAHEP-2

Subproject - "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 scalable and flexible manner. It is a learning system based on formalised 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 is restricted. Thus, a large number of learners have access to learning.

Several UG level e-Courseware 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 organisations 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. E-Learning activity is one of its major modules. Its major aim is to strengthen the Agricultural Higher Education in India**.** During Oct-Dec 2019, first open call was conducted for the creation of e-content for PG Courses.

The major objectives covered under First Open Call of the project at ICAR-IASRI are as follows:

- To develop the ICT infrastructure as technical assistance to Agricultural Universities
- To develop digital information systems for agricultural education, data collection, analysis and dissemination;
- To develop and implement next-generation management systems covering information in regard to procurement to contract management and financial management areas

Under the First Open Call, we invited applications from permanent teaching faculty of 45 agricultural universities to create 144 PG courses for establishment of E-Learning/m-learning systems through MOOC/LMS system for participating AUs is a major activity. 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

Second E-Learning Call

The Second 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 the upgradation and creation of already existing Under-Graduate e-courses. Some of the already existing courses on "e-krishishiksha" portal will be upgraded as per Fifth Dean Committee Report. The selected courses are mentioned in Annexure-IVA. For each e-course, one Content Reviser and one Course Reviewer will be selected. The syllabus for the courses is as per the prescribed UG curricula and syllabi of the Education Division, ICAR, New Delhi. In Second Open Call we also invite applications for creating new UG courses. The selected courses are mentioned in Annexure-IVB. For each Course, one Content Creator and one Reviewer will be selected.

The Course Structure and format for upgrading the eLearning content and the Honorarium is given below. Interested faculty can send their essential particulars along with the name of Courses in which they are interested, in the Application Form attached as Annexure-V, or apply online.

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 (Atleast 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 least5-10 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

Annexure -IVA

List of UG Courses to be Revised in Second Call

B.Sc (Agriculture)

S.No	Course
1	Livestock Production and Management
2	Weed Management
3	Statistical Methods
4	Post-harvest Management and Value Addition of Fruits and Vegetables
5	Principles of Seed Technology
6	Principles of Genetics
6	Elementary Mathematics
8	Fundamentals of Biochemistry
9	Renewable Energy
10	Agricultural Microbiology
11	Agricultural Marketing Trade and Prices
12	Agricultural Finance & Cooperation
13	Water Management Including Micro Irrigation
14	Insect Morphology and Systematics

B.Tech (Agricultural Engineering)

S.No	Course
1	Computer programming and Data Structures
2	Watershed Hydrology
3	Human Engineering and Safety
4	Mechanics of Tillage and Traction
5	Food Packaging Technology
6	Strength of Material
7	Engineering Chemistry
8	Electrical Machines and Power Utilization
9	Surveying and Levelling
10	Design of Structures
11	Engineering Mechanics
12	Watershed Planning and Management
13	Soil Mechanics
14	Heat and Mass Transfer
15	Engineering Physics
16	Engineering Mathematics - I

17	Engineering Mathematics - III
18	Applied Electronics and Instrumentation
19	Engineering Mathematics-II
20	Dairy and Food Engineering
21	Agricultural Structures and Environmental Control
22	Irrigation Engineering
23	Drainage Engineering
24	Groundwater, Wells and Pumps
25	Theory of Machines
26	Machine Design
27	Farm Machinery and Equipment
28	Farm Machinery and Equipment-II
29	Tractor Systems and Controls

B.Tech (Dairy Technology)

S.no	Course
1	Engineering Drawing
2	Thermodynamics
3	Dairy Engineering
4	Food Engineering
5	Workshop Practice
6	Heat & Mass Transfer
7	Refrigeration & Air-Conditioning
8	Material Strength & Dairy Machine Design
9	Instrumentation and Process Control
10	Dairy Process Engineering
11	Dairy Plant Design and Layout
12	Fluid Mechanics
13	Starter Cultures and Fermented Milk Products
14	Industrial Statistics
15	Milk Production Management & Dairy Development
16	Marketing Management & International Trade

17	Fundamentals of Dairy Extension
18	Environmental Studies
19	Communication Skills
20	Economic Analysis
21	Financial Management & Cost Accounting
22	Entrepreneurship Dev. & Ind. Consultancy
23	Fundamentals of Microbiology
24	Food and Industrial Microbiology
25	Ice-cream & Frozen Deserts
26	Market Milk
27	Food Technology-I
28	By-Products Technology
29	Food Technology-II
30	Cheese Technology
31	Fat Rich Dairy Products
32	Packaging of Dairy Products
33	Chemical Quality Assurance
34	Food Chemistry

35	Organic Chemistry
36	Physical Chemistry of Milk
37	Chemistry of Milk

B.Sc (Horticulture)

S.No	Course
1	Elementary Statistics and Computer Application
2	Introductory Crop Physiology
3	Growth and Development of Horticultural Crops
4	Medicinal and Aromatic Crops
5	Commercial Floriculture
6	Ornamental Horticulture
7	Principles of Plant Breeding
8	Plantation Crops
9	Tropical and Subtropical Fruits
10	Breeding of Fruit And Plantation Crops
11	Seed Production of Vegetable, Tuber and Spice Crops
12	Fundamentals of Horticulture
13	Weed Management in Horticultural Crops

14	Temperate Fruit
15	Water Management in Horticultural Crops
16	Farm Power and Machinery
17	Fundamentals of Soil Science
18	Introductory Agro-Forestry
19	Introduction to Major Field Crops
20	Organic Farming
21	Soil Fertility and Nutrient Management
22	Fundamentals of Entomology
23	Fundamentals of Plant Pathology
24	Insect Pests of Vegetable, Ornamental and Spice Crops
25	Insect Pests of Fruit, Plantation, Medicinal and Aromatic Crops
26	Diseases of Fruit, Plantation and Medicinal and Aromatic Crops
27	Diseases of Vegetable, Ornamental and Spice Crops
28	Nematode Pests of Horticultural Crops and Their Management
29	Fundamentals of Food Technology
30	Fundamentals of Extension Education
31	Horti-Business Management
32	Spices and Condiments

33	Potato and Tuber Crops
34	Tropical and Subtropical Vegetable Crops
35	Breeding of Vegetable & Tuber and Spice Crops

B.F.Sc (Fisheries)

S.No	Course
1	Freshwater Aquaculture
2	Genetics and Breeding
3	Ornamental Fish Production and Management
4	Principles of Aquaculture
5	Coastal Aquaculture and Mariculture
6	Fish Nutrition and Feed Technology
7	Marine Biology
8	Oceanography
9	Limnology
10	Soil and Water Chemistry
11	Freezing Technology
12	Refrigeration and Equipment Engineering

13	Fishing Craft Technology
14	Aquaculture Engineering
15	Fisheries Economics
16	Fisheries Extension Education
17	Information and Communication Technology
18	Statistical Methods
19	Fish Population Dynamics and Stock Assessment
20	Physiology of Finfish and Shellfish
21	Taxonomy of Finfish
22	Fish Immunology
23	Taxonomy of Shellfish
24	Inland Fisheries

B.V.Sc (Veterinary Sciences)

S.No	Course
1	Abattoir Practices and Animal Products Technology
2	Meat Science
3	Milk & Milk Products Technology
4	General Veterinary Biochemistry
5	Animal Biotechnology
6	General Veterinary Parasitology and Helminthology
7	Livestock Entrepreneurship
8	Principles of Animal Nutrition and Feed Technology
9	Regional Veterinary Surgery
10	Principles & Techniques of Veterinary & AH Extension
11	Veterinary Clinical Medicine-I
12	Veterinarian in Society
13	Zoo/Wild Animal Breeding, Management, Nutrition And Health Care
14	Animal Welfare and Ethics and Jurisprudence
15	Veterinary Preventive Medicine-II

16	Veterinary Gynaecology
17	Veterinary Obstetrics
18	Veterinary Clinical Biochemistry Lab Diagnosis-II
19	Veterinary Andrology and Reproductive Techniques
20	Veterinary Physiology – I
21	Veterinary Neuropharmacology
22	Veterinary Clinical Biochemistry Lab Diagnosis-I
23	General & Systemic Veterinary Pharmacology
24	Veterinary Gross Anatomy-II
25	Veterinary Splanchnology and Applied Anatomy
26	Veterinary Gross Anatomy – I
27	Veterinary Histology and Embryology
28	Systematic Veterinary Virology
29	Systematic Veterinary Bacteriology and Mycology
30	Veterinary Immunology &Scrology
31	General Veterinary Microbiology
32	Fodder Production and Grassland Management
33	Diversified Poultry Production and Current Concepts In Poultry Management and Marketing

34	Environment & Environmental Hygiene
35	Commercial Poultry Production & Hatchery Management
36	Veterinary Epidemiology and Zoonosis
37	Avian Production Management
38	Veterinary Entomology and Acarology
39	Livestock and Poultry Breeding
40	Principles Of Animal Genetics and Population Genetics
41	Special Veterinary Pathology
42	General Veterinary Pathology
43	Aquatic Animal Diseases Health Care & Management
44	Avian Pathology

B.Sc (Home Science)

S.No	Course
1	Developmental Assessment of Young Children
2	Food Toxicology
3	Food Preservation and Storage
4	Community Nutrition
5	Food Science and Processing
6	Normal and Therapeutic Nutrition
7	Food Standards and Quality Control
8	Housing and Space Management
9	Project Management
10	Computer Aided Interior Design
11	Instructional Video Production
12	Women In Agriculture
13	Public Relations and Social Marketing
14	Fashion Illustrations
15	Fundamentals of Clothing Construction
16	Introduction to Clinical Nutrition ~Clinical Nutrition

Annexure -IVB

List of UG Courses to be Created in Second Call

B.Sc (Agriculture)

S.No	Courses
1.	Introductory Agro meteorology& Climate Change
2.	Principles of Organic Farming
3.	Farm Management, Production & Resource Economics
4.	Problematic Soils and Their Management
5.	Communication Skills and Personality Development
6.	Environmental Studies and Disaster Management
7.	Introduction to Forestry
8.	Intellectual Property Rights
9.	Commercial Plant Breeding
10.	Food Safety and Standards
11.	Geoinformatics and Nanotechnology and Precision Farming

B.F.Sc (Fisheries Science)

S.No	Courses
1	Fisheries Business Management and Entrepreneurship Development
2	Fish Food Organisms
3	Therapeutics in Aquaculture
4	Aquatic Ecology, Biodiversity and Disaster Management
5	Fish Canning Technology
6	Fish Products and Value Addition
7	Fish By-Products and Waste Utilization
8	Quality Assurance of Fish and Fishery Products
9	Navigation and Seamanship
10	Fisheries Policy and Law
11	Fisheries Co-operatives and Marketing

B.Tech (Agricultural Engineering)

S.No	Courses
1	Building Construction and Cost Estimation
2	Thermodynamics, Refrigeration and Air Conditioning
3	Theory of Machines
4	Web Designing and Internet Applications
5	Artificial Intelligence
6	Environmental Science and Disaster Management
7	Sprinkler and Micro Irrigation Systems
8	Engineering Properties of Agricultural Produce
9	Bio-energy Systems: Design and Applications
10	Remote Sensing and GIS Applications
11	Management of Canal Irrigation System
12	Plastic Applications in Agriculture
13	Precision Farming Techniques for Protected Cultivation
14	Water Quality and Management Measures
15	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	Ergonomics and Appropriate Technologies
5	Food and Nutrition Policy and Agriculture
6	Marriage and Family Dynamics
7	Elementary Statistics
8	Technical Writing (English)
9	Introduction to rural sociology

B.Tech (Dairy Technology)

S.No	Courses
1	Energy Conservation and Management
2	Quality and Safety Monitoring in Dairy Industry
3	Microbiology of Fluid Milk
4	ICT in Dairy Industry and Introduction to Operations Research
5	Nutraceuticals and Functional Foods
6	Emerging Dairy Processing Technologies

B.Sc (Horticulture)

S.No	Courses
1	Dryland Horticulture
2	Precision Farming and Protected Cultivation
3	Apiculture, Sericulture and Lac Culture
4	Agro-meteorology and Climate Change
5	Entrepreneurship Development & Business Management

Annexure-V

Application Form

Second Open Call for Inviting the Proposals from Faculty / Researchers for e-Learning Content Revision /Creation under NAHEP Project "Investments in ICAR Leadership in Agricultural Higher Education"

Full Name (in block letters)		
Discipline		
Designation		
Name of ICAR Institute/ Agricultural University/ College		
Address For Correspondence		
Email Address		
	Official	
	Mobile	
Gender(Male/Female)		
Applying as Reviser /Reviewer/Creator		
Whether Faculty in the Discipline or Not		
Teaching / Research Experience (No. of years)		
Experience of Digital Content Creation (If any)		
If Yes, Number and Names of E-Course's developed	1.	

	2
Name and Discipline of E-Course for Revision / Creation	

Educational Qualifications

Degree	Discipline	Year	Class	University
Ph.D.				
Masters				

Signature of the Applicant **Date** **Place**

Recommended By the Dean and Nodal Officer (NAHEP-Component2A) of the Institute/University

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Signature Designation

Address Date