

THE OPEN UNIVERSITY OF SRI LANKA AND THE DISTANCE EDUCATION COURSES IN AGRICULTURE

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Introduction

The Open University of Sri Lanka is the only university in the country that conducts courses/programmes on distance education methods. The Open University of Sri Lanka consists of four faculties: Faculty of Engineering Technology, Faculty of Natural Sciences, Faculty of Education and Faculty of Humanities and Social Sciences. Faculty of Engineering Technology has six academic departments namely Agricultural and Plantation Engineering, Civil Engineering, Electrical and Computer Engineering, Textile Engineering, Mechanical Engineering and Mathematics and Philosophy of Engineering.

1. Landscape of the institution's capacity building activities in traditional agriculture and distance learning courses

The Department of Agricultural and Plantation Engineering offer four programs as follows:

- Diploma in Technology (Agricultural Engineering)
- Bachelor of Technology (Agricultural Engineering)
- Diploma in Industrial Studies (Agriculture)
- Bachelor of Industrial Studies (Agriculture)

Diploma/Degree in Technology (Agricultural Engineering)

Since 1995, this department offers courses in Technology (Engineering) programme leading to the award of Diploma in Technology and Bachelor of Technology with a possibility of specialization in Agricultural Engineering. These programmes include agricultural engineering courses with other engineering courses such as Civil, Mechanical and Electrical Engineering with a heavy mathematics component. The contents of the programme includes extensive number of mathematics courses and agricultural engineering courses covering soil and water engineering, post harvest technology and power and machinery in agriculture. However students who enter the Faculty of Engineering Technology with mathematical background prefer other established fields such as civil engineering, mechanical engineering, electrical and computer engineering rather than the relatively new field of agricultural engineering. Therefore, little number of students opt for agricultural engineering specialization.

Diploma/degree in Industrial Studies (Agriculture)

Sri Lanka is predominantly an agriculture based economy, where two thirds of the country's population is engaged in agriculture related activities. Due to several reasons, this sector is given low priority, and is thus not an attractive discipline among students. The main stream agriculture education is geared to meet organised modern agriculture and traditional forms of agriculture that are now being promoted as sustainable methods. On the other hand, rural population is finding ways to improve their livelihoods through their own agricultural activities in rural areas.

Out of the 12 Sri Lankan state owned conventional universities, only four universities (Peradeniya, Ruhuna, Eastern and Jaffna) offer conventional type of Bachelor of Science degree in Agriculture. In addition, there are few institutes (School of Agriculture, Hardy Senior Technical Institute and the Aquinas College, Colombo) which award Diploma in Agriculture. At present all the universities and the institutes offer Degree and Diploma in Agriculture for only full time students. These programmes in the agricultural sector are mainly science based with little emphasis on technological, industrial and management content— the latter three being necessary for appropriate content development. Therefore a programme of study targeted towards the agricultural industry without hard engineering content, is essential to fulfil the present needs of the Sri Lankan agriculture.

Rapidly growing environmental concerns in the agricultural sector necessitate updating and upgrading of knowledge, with distance education serving as a conduit to achieve it. Distance education in the agricultural discipline would allow for new contents to be incorporated into the curriculum, and will be demand-driven based on “location-specific” needs. At present there is no opportunity for individuals working in the agriculture sector to acquire a Diploma or Degree in an agriculture related field while being simultaneously employed. The Open University of Sri Lanka with its infrastructure of regional and study centers, could provide new forms of knowledge on industrial oriented agriculture through distance education methodology.

Target Group

There are about 5,000 agriculture diploma holders employed in the Government and Private sector in the country. While they bear responsibilities similar to an agricultural graduate, there are no further avenues for them to acquire a degree in agriculture related area that can improve their promotional prospects. At present only a very limited number of agriculture diploma holders are absorbed into the conventional universities with a degree in Agriculture. Distance Education could be an appropriate mechanism for these individuals to pursue higher studies and obtaining a degree while being employed.

In the extension system of the agriculture sector, there are Agricultural Research and Development Officers (ARDOs) appointed for each and every Gramasevaka Division (one officer per Gramasevaka Division to support 150-250 farm families). Farm families are either engaged in paddy, vegetable, fruit crops cultivation, post harvest activities and animal husbandry. The ARDO's duties are to assist the farm families in Sri Lanka on any agricultural activity specific to the location. These officers are mainly G.C.E A/L qualified and they do not have enough knowledge on agriculture to advice the rural farmers about the new technology. In addition, they do not have an opportunity to learn about the best practices in agricultural extension services while being employed, other than the short-term training given by the Department of Agriculture. One ARDO per district is selected to acquire Diploma in agriculture from the Schools of Agriculture. At present there are about 10,000 such officers in the agriculture sector and there is an urgent need to upgrade their knowledge in extension services to make the agricultural sector sustainable.

2. Courses offered and the contents related to CGIAR Center mandates

Courses offered by the University by distance learning methods are mainly for undergraduate programmes and encompass a vast area in food production such as paddy, vegetable, fruits, cut flower cultivation and production, soils, food science, nutrition irrigation, water resources,

animal husbandry, fisheries, aquaculture, crop protection, agricultural economics, marketing and post harvest management of cereals and perishables. In the programme structure, there are compulsory courses and optional courses. The list of courses is given in Table 1.

Table 1 Courses offered by the Department

No	Courses code	Course Title
1	AEX2130	Nature and environment
2	AEX3230	Crop production and farming systems
3	AEX3231	Soil management, tillage and traction
4	AEX3232	Plant and soil science
5	AEX3233	Post harvest technology I
6	AEI3234	Agricultural biology I
7	AEI3235	Land and Soil Tillage management
8	AEI3236	Post harvest Biology and Technology I
9	AEZ3238	Mathematics for agriculture
10	AEX4230	Integrated crop protection
11	AEX4231	Food and nutrition
12	AEX4232	Soil and water conservation
13	AEJ4233	Rural sociology
14	AEM4234	Agricultural economics and management
15	AEM4235	Agricultural marketing
16	AEX4237	Irrigation and drainage engineering
17	AEI4238	Agricultural biology II
18	AEX5230	Power and machinery in agriculture
19	AEX5231	Post harvest technology II
20	AEX5232	Soil plant water relationships
21	AEI5230	Fisheries and Aquaculture
22	AEJ5240	Indigenous Knowledge of Herbal Products
23	AEI5241	Agricultural Biotechnology
24	AEI5243	Farm Power and Machinery
25	AEI5244	Post harvest Biology and Technology II
26	AEX6230	Environment control in agricultural structures
27	AEX6231	Processing of food products
28	AEX6233	Hydrology
29	AEI6132	Groundwater resources management
30	AEI6234	Environment control in farm structures
31	AEI6235	Hydrology and water resources
32	AEI6236	Food processing
33	AEI6137	Impact of climate change on water resources
34	AEI6138	Fruit crops and cut flower production
35	AEI6239	Animal husbandry and production
36	AEK2130 / ECK2130 / ECE2105	Word for Windows
37	AEK2132 / ECK2132 / ECE2107	Excel for Windows

The students have to complete the compulsory courses and select optional courses to fulfil the credit requirements before pursuing other employment opportunities.

Since the target group is the people already working in the agricultural sector, the fieldwork requirement will be less compared to the conventional diploma/degree. However students will also be exposed to additional knowledge through several seminars and field trips, laboratory classes and work in the Open University Agriculture Farm.

The courses listed in Table 1 are designed in order to enhance agricultural development, food security, and poverty alleviation— thus achieving the CGIAR mission of sustainable food security and reduced poverty in developing countries.

3. GO-FAU contribution to content development and capacity strengthening in the Open University of Sri Lanka

Agriculture, a dominant sector in most developing economies, is increasingly becoming a knowledge-based sector. Bringing about sustainable improvements in this sector is critical for achieving economic growth, creating wealth, and reducing poverty and environmental degradation. However, achieving sustainable growth in agriculture and food systems depends on new science-based technologies, effective policies, responsive and efficient institutions, and a trained cadre of professionals knowledgeable in these areas. Therefore, a massive scaling up of trained personnel is needed, especially at the postgraduate level.

Presently there are no post graduate programmes related to agriculture offered by this institution in distance education. The Global Open Food and Agriculture University (GO-FAU) will be able to strengthen postgraduate level education in agriculture for the Open University of Sri Lanka by providing assistance in the following:

- Building capacity of faculty members involved in content development and delivery of Masters Programme in Agro-ecology and Agribusiness
- The Open University would seek assistance from GO-FAU in developing Masters Programme in Water Resources Management— a much needed programme for Sri Lanka
- Development and enhancement of global knowledge sharing systems
- Social marketing
- Monitoring and evaluation for the sustainability of the program
- Capacity building of the Agriculture Laboratory and the Agriculture Farm.

4. Other related initiatives

- Degree of master of Arts in Teacher Education (International Programme) is offered by the Department of Education of the Faculty of Education, in partnership with the Commonwealth of Learning
- Commonwealth Executive Master of Business Administration (CEMPA) and Commonwealth Executive Master of Public Administration (CEMPA) offered by Department of Management Studies in collaboration with Commonwealth of Learning and four South Asian universities

- Postgraduate Diploma in Development Studies & Public Policy offered by the Department of Social Studies in collaboration with Marga institute, Colombo, Sri Lanka
- Postgraduate Diploma in Environment and Sustainable Development by the Open Universities of South Asia viz: OUSL, IGNOU, BOU and AIOU and funded by South Asia Foundation.
- Asian Development Bank (ADB) funded Distance Education Modernization Project for modernization and enhancement of the capacity of Open University of Sri Lanka.
- MoU is already signed between the Open University of Sri Lanka and the Global Open Food and Agriculture University to offer masters programme on Agro-ecology and Agribusiness.