Diploma of agricultural development and food security of Nile Basin Countries

1. Compulsory Curriculums Divided into two terms

First: The first semester

<table>
<thead>
<tr>
<th>Curriculum Code</th>
<th>Curriculum Title</th>
<th>Theoretical Hours</th>
<th>Credit Hours</th>
<th>Exam Duration</th>
<th>Final Result</th>
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<td>Geography and Population of Nile Basin countries</td>
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<td>Economics of Natural Resources (water and earth)</td>
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<td>Human Development and Agricultural workers in Nile Basin Countries</td>
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Second: The second semester

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## 2-Optional Curriculums Divided into two terms

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**Curriculums Description**

**Geography and Population of Nile Basin countries**

- Definitions of river Basins their boundaries.
- Upstream and downstream countries.
- Topography of Nile Basin countries.
- Climate and botanical conditions of the Nile Basin.
- Distribution of Nile Basin population.
- Factors of population growth of Nile Basin countries.
- Demographic structure of Nile Basin countries.
- Population immigration among Nile Basin countries.

**Economics of Natural (water and earth) Resources of Nile Basin Countries**

- Definite concepts, types, and partitions about Natural (water and earth), and Environmental Resources.
- Demanding for natural resources.
- Natural resources management.
- Sustainability problem in using the natural resources.
- Economics of natural resources protection.
- Policies for green economics encouragement.
- The effect of changing climate on using natural resources.
- The efficiency of using the natural resources.

**Sustainable agricultural development of Nile Basin Countries**

- Development (concepts and theories).
- Development indicators in Nile Basin Countries.
- The role of agricultural sector in general.
• Continuous development and balancing of environmental, economic and social developments.
• Analyzing the effect of economic policies on developing the agricultural sector.
• The effect of foreign trade policies on developing the agricultural sector.
• A matrix of analyzing agricultural policies.

**Human development and agricultural workers of Nile Basin Countries**

• Historical development of human resources management.
• Jobs for human resources management.
• Analyzing and assessing jobs.
• Human resources planning.
• Workers performance assessment.
• Training and developing human resources.
• Human resources development.
• Special issues about human resources development in Nile Basin Countries.
• Types of agricultural workers.
• Unemployment and its types.
• Development of the agricultural machine in developing countries.
• Obstacles of insertion the agricultural machine in Nile Basin Countries.
• Expansion ways in using the agricultural machine.
• Estimate needs and abilities of human, animal and automatic works.

**Agricultural prices and food security of Nile Basin countries:**

• Basic concepts, the importance of internal and pricing policies.
• Economic fundamentals used to identify prices especially agricultural.
• Reasons and effects behind changing the prices of agricultural products.
• Global prices and its relation to agricultural products local prices.
• Economic cycles and its relation to the agricultural prices.
• The Wide theory.
• Markets equilibrium.
• Factors affecting demanding on food commodities.
• Factors affecting supplying food commodities.
- Price indices.
- Time series.
- Predicting the agricultural prices and (consumption, productive) decision making.
- The concept of food security.
- Policies supporting food security.
- Global prices and its effect on food security.
- Standards of food insecurity, and ways for facing it.

**Preparing and analyzing common agricultural projects between Nile Basin Countries**

- The most important concepts about projects feasibility study.
- Project types.
- Project cycles.
- Types of feasibility studies.
- Market analysis, project funding structure and ways for loan payment.
- Funding analysis and projects assessment.
- Projects economic analysis.
- Projects sensitivity analysis.
- Solve the inflation problem during projects assessment (under risk).

**Operation Researches:**

- Special concepts.
- Goals.
- Different fields of operation researches.
- The importance of statistical programs used in achieving operation researches.
- Using models of multi regression analysis.
- Making analysis models.
- Using “path program” in operation researches.
- Obstacles facing operation researches.
- Linear programming.
- Transportation and privatization problems.
Economics of fish wealth and aquaculture of Nile Basin Countries

- The importance of fish production at the level of Nile Basin countries.
- Principles of fish production economics.
- Figures of fish production functions.
- Production efficiency and its relation to the changing of fish production technology.
- Cost functions in long and short term.
- Analysis of the best production volume and the greatest profit volume.
- The best farm behavior.
- Balancing of institutions in local markets.
- Standards of Production efficiency in fish production field.
- Practical examples of fish production field in Nile Basin countries.

Economics of animal production of Nile Basin Countries:

- The importance of animal production for economy at the level of Nile Basin Countries.
- Principles of animal production economics.
- Figures of animal production functions.
- Production efficiency and its relation to the changing of animal production technology.
- Cost functions in long and short term.
- Analysis the best production volume and the greatest profit volume.
- The best farm behavior.
- Balancing of institutions in local markets.
- Standards of Production efficiency in animal production field.
- Practical examples of animal production field in Nile Basin countries.

Economics of plant production of Nile Basin Countries:

- The importance of plant production for economy at the level of Nile Basin Countries.
- Principles of plant production economics.
- Figures of plant production functions.
• Production efficiency and its relation to the changing of plant production technology.
• Cost functions in long and short term.
• Analysis the best production volume and the greatest profit volume.
• The best farm behavior.
• Balancing of institutions in local markets.
• Standards of Production efficiency in plant production field.
• Practical examples of plant production field in Nile Basin countries.

**Marketing and Agricultural Foreign Trade of Nile Basin Countries:**

• The concept of agricultural marketing, and its importance.
• Researches and syllabus of agricultural marketing.
• Mediators and markets of agricultural products.
• Jobs and marketing services.
• Margins and production efficiency.
• Elements of blend marketing.
• How to put a marketing plan.
• Marketing researches.
• Developments of the international economy.
• The definition of economic blocs.
• Current problems about African agricultural economy.
• Agricultural cooperation between Nile Basin Countries.
• Effect of institutions and economic blocs on the agricultural foreign trade in Nile Basin Countries.

**Agricultural funding of Nile Basin Countries:**

• Definition of the agricultural funding, and its relation to other sciences.
• Classifying agricultural loans, guarantees, and supervising them.
• Different ways to calculate profits.
• Different ways to repay loans.
• The current funding structure of agricultural sector in Nile Basin Countries.
• Roles of politics and credit institutions in achieving Nile Basin countries agricultural goals.
Management of Agricultural projects in Nile Basin Countries

- An introduction about agribusiness system and its functions.
- Planning function.
- Organizing and controlling functions.
- Orientation function.
- Assessment function.

Management of water resources of Nile Basin Countries

- Integrated management (importance and definitions).
- Demanding and supplying on water resources, and its estimation.
- Water balancing and planning environmental and water resources.
- Management of water resources (economic, social and political aspects).
- Irrigation systems and water management.
- Efficiency of using water resources.
- Legislation and specified strategies for managing Nile resources.

Legal Aspects for promoting cooperation between Nile Basin countries

- The importance of studying the legislations and agricultural laws in the Nile Basin countries.
- The Evolution of the legislations and agricultural laws in the Nile basin Countries.
- The suitability of agricultural legislations in comparison with international agricultural agreements.
- Some models of bilateral and multilateral agreements between the African countries with regard to the situation of the Nile Basin countries in these agreements.

Agricultural policy of Nile Basin countries:

- Development of the global economy.
- Nature of the economic relationships.
- Basis of the international exchange.
• Identifying the economic blocks.
• The current problems of the international economy.
• The Arab common market.
• Egyptian European participation.
• Economic international organizations.
• International monetary fund.
• The entry strategy to global markets.
• The effect of economic blocks and organizations on the foreign trade of Egyptian agricultural commodities.

Economics of mechanization of Nile Basin countries:

• Goals of the agricultural machinery insertion in Nile Basin countries.
• Obstacles of agricultural machinery insertion in Nile Basin countries.
• Estimating of needs and skills of three of human, animal and mechanical works.
• Economic assessment of the agricultural machine.