AEC 2101 PRODUCTION ECONOMICS

**2. COURSE CODE**

**3. COURSE INSTRUCTORS**

Dr. Samuel Mugasi Katambi (B.Sc. Agric., M.Sc. Agric. Econ., Ph.D (Agric. Econ). Makerere University

Mr. Stephen Lwasa (B.Sc. Agric., M.Sc. Agric. Econ., Ph.D candidate, Makerere University)

**4. COURSE TYPE -** CORE

(B.Sc. Agric. II, B.FST II, B.HORT. II, B.ABM II, BA.SS Rural Economy Option II)

**5. COURSE STRUCTURE & LOCATION**

2 Credit units. 30 lecture hours (2 contact hours per week for 15 study weeks). Lectures will be conducted from Makerere University, Faculty of Agriculture, Department of Agricultural Economics and Agribusiness.

**6. COURSE DESCRIPTION**

Background to the course and stage setting in relation to changing circumstance related to resource use. Analysis of Production with one variable input. Production with more than one factor of production. Understanding Costs and underlying relations. Industry’s supply and factor demand. Optimum resource and enterprise combination.

**7. SPECIFIC COURSE OBJECTIVES**

The **overall objective** is to equip students with basic tools of allocating scarce resources to attain theoretically sound optimal output and income, with special emphasis on agricultural and agribusiness related problems and applications.

**The specific objectives**

* To provide students with an understanding of the production process from an economic point of view to ensure efficiency in resource use.
* To understand how inputs and outputs are relate.
* To provide students with a quantitative and analytical approach of understanding derivations of optimal resource and enterprise combinations.

**8. READING LIST**

1. Bishop and Toussaint (1992). Introduction to Agricultural Economic Analysis.
2. Castle, Baker and Smith (1972). Farm Business Management: The Decision Making Process. Third edition.
3. Doll, J.P and Orazem, F. Production Economics: Theory with applications
4. Gould, J.P and Lazeor, E.P (1989). Microeconomic Theory: Irwin Publications.

**9. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED**

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| **TOPIC** | **CONTENT** | **METHOD OF INSTRUCTION/****TIME ALLOCATED** | **TOOLS/****EQUIPMENT NEEDED** |
| 1.Introduction | * Definition, subject matter and goals of production economics
* The relevance of the Theory
* Relation to other fields
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 2. Production with more than one variable input | * Production and the production function
* The laws of return
* Total, Average and Marginal Physical products
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 3. Production with more than one variable input (cont’d) | * The law of diminishing returns and stages of production
* The symmetry of stages of production
* Diminishing returns and smallholder decisions
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 4. Production with more than one variable input (cont’d) | * The Economic optimum
* Returns to scale
* Technical and Economic optimal in factor/product relationships
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 5. Production with more than one variable factor (con’td) | * Overview (introduction)
* The production surface
* The rational zone of production
* Isocost and isoquants
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 6. Production with more than one variable factor (cont’d) | * The optimum combination of resources
* How much to produce
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 7. Production with more than one variable factor (cont’d) | * How inputs combine
* Technical and Economic Efficiency in factor/factor relationships
* Elasticity: concept and calculation
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |

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| **TOPIC** | **CONTENT** | **METHOD OF INSTRUCTION/****TIME ALLOCATED** | **TOOLS/****EQUIPMENT NEEDED** |
| 8. Concepts and measures of costs | * Overview (introduction)
* Costs of production
* Time horizons as related to costs
* Short run costs
* Unit costs
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 9.Concepts and measures of costs (cont’d) | * The firm’s short-run supply curve
* The revenue function and profit maximization.
* Long run costs
* Other cost concepts
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 10. Industry supply and factor demand | * Price and employment of inputs
* Profit maximization and input employment
* Determinants of the demand for an input
* Market structures
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 11. Industry supply and factor demand (con’td) | * The market supply curve: The backward slopping case
* Price and employment of an input
* Rent and quasi rent
* Qualitative differences among inputs
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 12. The optimum enterprise combination  | * The theory of enterprise combination (with emphasis on Production Possibilities Frontier)
* Optimum combination of enterprises (basing on the Equi-marginal returns principle and the Opportunity cost principle)
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 13. The optimum enterprise combination (con’td)  | * How much to produce
* Expansion path
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 14. The optimum enterprise combination (con’td) | * Convex transformation curves Product relationships
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 15. The optimum enterprise combination (con’td) | * Risks and uncertainties
	+ - Definition
		- Examples
		- Mitigation measures
 | Interactive Lectures (2 hours)Individual and group assignments | Chalk, BB, Flip Chart, Markers, Laptop and LCD projector |
| 16-17 | * Revision Time
* Final Examination
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**10. SUMMARY OF TIME NEEDED**

Lectures 30 hrs

**11. COURSE ASSESSMENT:**

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| Continuous assessment (short quizzes): | There will be 2 quizzes during the 4th and 13th week of the semester | 20% |
| Continuous assessment (Test): | A 2 hour test will be given during the 9th week of the semester | 20% |
| University Examination: | Final examination during week 16-17 of the semester | 60% |

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