MAKERERE UNIVERSITY BUSINESS SCHOOL

FACULTY OF GRADUATE STUDIES AND RESEARCH

DEPARTMENT OF ACCOUNTING

COURSE OUT LINE

PROGRAM :	MASTER OF ENERGY ECONOMICS & GOVERNANCE
COURSE NAME:	ENERGY COSTING
COURSE CODE:	EEG 815
ACADEMIC YEAR:	2026/2027
YEAR OF STUDY: TWO	SEMESTER: ONE
CREDIT UNITS: 3	CONTACT HOURS: 45

Course Description

This course aims to improve students' understanding of and skills in developing, assessing, and presenting pricing and other costing issues in the energy sector. The course also emphasizes fiscal policy, and more specifically, the taxation of energy resources. Emphasis will be placed on methods and examples of relevance for the energy sector. The course combines the concepts and techniques of pricing and taxation with hands-on experience and computer assignments involving various aspects of costing and pricing: i) collecting data; ii) organizing data; iii) preliminary graphical and statistical analysis; iv) model specification; v) model estimation; vi) model evaluation and validation; and vii) pricing and taxation assessment. Computer work will utilize standard and emerging software such as Eviews, Stata, R, and explore models of energy modelling.

Course Objectives

The course is intended to;

i. Equip students with the practical skills in the costing of energy and overall energy sector.
ii. Expose students to relevant information related to energy costing rationalization.
iii. Augment students' construction, evaluation, and presentation capabilities in policy analysis, design, and implementation in the energy sector.

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Learning Outcomes

By the end of the course, students should be able to:

i. Generate relevant energy costing data in energy sector

ii. Guide the energy sector in energy rationalization to ensure efficient and sustainable sector operations

iii. Construct, evaluate, and present energy policies in the energy sector.

COURSE CONTENT
Detailed Outline

S/N	Topic	Lesson Details	Hours
1	Introduction and overview	• Energy Markets • Electricity markets • Other forms of energy markets • Energy Taxation	2
2	Principles of Energy Pricing	• Introduction • Basic Competitive Market Model • Extension of the Basic Model • Indivisibility of Capital • Depletion of Exhaustible Resources • Asset Specificity and Capital Intensiveness • Market Failures • Monopoly Problems Natural Monopoly	14
		• Existence of Rent • Externality and Public Goods • Government Intervention and Role Government in the Sector.	

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3	Energy Pricing and Taxation	• Tradability of Energy • Opportunity Cost Peak and Off-Peak Pricing • Peak Load Pricing Principle • Short-Run Versus Long-Run Debate • Energy Taxes and Subsidies • Principles of Optimal Indirect Taxation • Equity Considerations • Issues Related to Numerical Determination of an Optimal Tax • Energy Taxes in Nordic Countries: Example. • Who Bears the Tax Burden? • Subsidies • Implications of Traditional Energies and Informal Sectors in Developing Economies for Energy Pricing.	14
4	Energy Pricing in Uganda	• Overview and data • Energy value chain in Uganda • Energy actors • Determination of energy prices in Uganda • Options for policy	8
5	Energy Revenue in Uganda	• Energy base in Uganda • Tariff lines • Challenges to revenue taxation in Uganda • Options for policy	7
	Total		45

Method of Delivery

- Interactive lectures
- Computer lab sessions
- Blended Learning
- Computer assignments
- Student paper and presentation

Assessment

- Course work 30%
- Final examination 70%
- Total 100%

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Reading List

1. Bhattacharyya SC (2011). Concepts, Issues, Markets and Governance, Springer London
2. J. M. Wooldridge (2014): Introduction to Econometrics, First EMEA Edition, Cengage Learning.
3. Train, K.E 1991. Optimal Regulation: The economic theory of natural monopoly, Massachusetts Institute of Technology, USA
4. Republic of Uganda, The Energy Policy 2002.
5. Bierer Annett, Götze Uwe (2012). "Energy Cost Accounting", *Journal of competitiveness*. Vol. 4, Issue 2, pp. 128-144.
6. Fashina, A., et al. (2019). "The Drivers and Barriers of Renewable Energy Applications and Development in Uganda: A Review." Clean Technologies **1**(1): 9-39.
7. Colin Drury, (2004), Management and Cost Accounting (4th Edition).
8. Ministry of Finance, Planning and Economic Development (MoFPED). Public Investment Manual for Project Preparation and Appraisal. Kampala: Republic of Uganda.