هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**Electricity Markets**
Course Code:	**0605-724**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☑
3. Level/year at which this course is offered: Level 4 / 2ed year
4. Pre-requisites for this course (if any)**:** **energy economics, macroeconomics and microeconomics 1**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	**45**	**100**
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**45**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	**45**

B. Course Objectives and Learning Outcomes

1. Course Description

Electricity deregulation and the increase of government expenditure on electricity subsidize can have dramatic changed on the electricity markets. Illustration heavily on the tools of economics and finance, this course will cover the regulatory and public policy issues that these changes have raised. The impacts and consequences of different strategies are evaluated in the context of the continuing changes in the organization and regulation of electricity markets.

2. Course Main Objective

The main objective of this course is to let the students aware about the linkage between energy use in the field of electricity markets.

Course Objectives

- **Upgrade continuously the teaching sources like books, research papers and other online sources.**
- **Increased use of IT in communication with students and delivery of the course home works and case studies using Blackboard system.**

- **Continuous feedback and discussion between instructors and students through observations, students' evaluations, blackboard, questionnaires and office hours.**

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Describe the principles of how an electricity market can be organized.**	**K1**
1.2	**Describe methods to handle congestion in power market.**	**K2**
2		
2.1	**Analyze pricing in large power systems with combination of several characteristics.**	**S1**
2.2	**Analyze the trade off between lower prices and reliability in large power systems.**	**S2 and S3**
3		
3.1	**Formulate market simulation problems with mathematical expressions.**	**V3**
3.2	**Demonstrate investment dynamics in electricity markets.**	**V1 and V2**

C. Course Content

No	List of Topics	Contact Hours
1	**1- 1 The Basics** 1.1 How electricity works 1.2 Early development of the Electricity Supply Industry (ESI) 1.3 New ownership structure	**3**
2	**2- Structure, Operation and Management of the Electricity Supply Chain** 2.1 Energy sources 2.2 Power generation 2.3 Distribution 2.5 Metering 2.6 Supply	**3**
3	**3 Policy – Issues, Priorities, Stakeholders, Influencers** 3.1 Agendas and policy formation 3.2 Energy policies 3.3 Domestic institutional players	**3**
4	**4- Market Structures for Electricity** 4.1 The basics of plant dispatch 4.2 The single buyer 4.3 Imbalance and balancing 4.4 Power exchanges	**6**
5	**5- Power Capacity** 5.1 The definition of capacity 5.2 Requirements for Capacity	**3**

	5.3 Capacity provision – the supplier's perspective 5.4 Effect of price caps on capacity and prices	
6	**6- Location** 6.1 Infrastructure costs to be recovered 6.2 Basic charging elements for location related charging 6.3 The energy complex 6.4 Environmental borders	**3**
7	**7- Environment, Amenity, Corporate Responsibility** 7.1 Environmental pressure 7.2 Definitions 7.3 The policy debate 7.4 Fuel labelling and power content labelling 7.5 The environmental impact of consumption	**6**
8	**8- Economic Principles in Relation to the ESI** 8.1 Basic economic principles in an ESI context 8.2 Optimal pricing by asset owners 8.3 Regulated prices 8.4 Taxes and subsidies 8.5 Environmental economics	**6**
9	**9- Security of Supply** 9.1 Supply chain 9.2 Reserve margin 9.3 The responsibility for security of supply	**6**
10	**10- Financial Modelling of Power Plant** 10.1 Power plant financial model 10.2 The baseload contract 10.3 Extra flexibility 10.4 Accounting	**6**
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	**Describe the principles of how an electricity market can be organized.**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
1.2	**Describe methods to handle congestion in power market.**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)**

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
			- Final exam
2.0			
2.1	Analyze pricing in large power systems with combination of several characteristics.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project
2.2	Analyze the tradeoff between lower prices and reliability in large power systems.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project
3.0			
3.1	Formulate market simulation problems with mathematical expressions.	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project
3.2	Demonstrate investment dynamics in electricity markets.	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	During the whole semester	10%
2	Class participation	During the whole semester	10%
3	Assignments /projects/reports	During the whole semester	10%
4	Midterm Exam	8th	30%
5	Final Exam	16th	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Chris Harris. *Electricity Markets: Pricing, Structures and Economics*, ISBN-13: 978-0470011584**
Essential References Materials	**Reading article on economics of electric.**
Electronic Materials	1. https://www.emrsettlement.co.uk/about-emr/capacity-market/ 2. https://www.gov.uk/government/collections/electricity-market-reform-capacity-market 3. https://www.flexitricity.com/en-gb/solutions/capacity-mark
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**Energy Economics and Policy**
Course Code:	**0605-621**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: Level 2 / 2ed year
4. Pre-requisites for this course (if any)**:** **Microeconomics I (0605-611)**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

This course explores the theoretical and empirical perspectives on individual and industrial demand for energy, energy supply, energy markets, and public policies affecting energy markets. It discusses aspects of the oil, natural gas, electricity, and nuclear power sectors and examines energy tax, price regulation, energy efficiency and policies for controlling emission.

2. Course Main Objective

The main objective of this course is to explore the main energy resources and their different uses globally and in Saudi Arabia.

Course Objectives

- **Define major energy problem.**
- **Discuss various type of energy.**
- **Analyze the demand of energy over the economy.**
- **Identify the role of the price of energy worldwide.**

Exercise the impact of the energy policies.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Describe the arising issues in energy markets globally and in Saudi Arabia in particular**	**K1**
1.2	**Define types of energy and appraising problems related to energy matters**	**K2**
2	**Skills:**	
2.1	**Analyze resources markets and understand the limitations of models.**	**S1**
2.2	**Design a related energy topic of your choice to present to the class.**	**S2 and S3**
3	**Values:**	
3.1	**Demonstrate the theory of energy markets and critically engage with market design issues and policy questions.**	**V3**
3.2	**Understand the economics of climate change and ethical questions that a raise.**	**V1 and V2**

C. Course Content

No	List of Topics	Contact Hours
1	**1- Energy resources** **1.1- Definition of energy.** **1.2- Types of energy.** **1.3- Important of energy.**	**6**
2	**2- Energy markets** **2.1Introduction of energy worldwide.** **2.2Demand and supply of energy.** **2.3World market of energy.**	**9**
3	**3- Energy market structure** **3.1- Market types.** **3.2- Energy market analysis.** **3.3- world energy market structure.**	**6**
4	**4- Energy resources and the optimal allocation of resources** **4.1- Types of energy resources.** **4.2- Demand on different types of energy resources.** **4.3- The effect of the technology on the energy recourses demand.**	**6**
5	**5- The role of energy in economic development** **5.1- Importance of different type of energy in the economy.** **5.2- Difference in the demand of energy between developed and developing economy.** **5.3- Energy the key of developing.**	**9**

6	**6- The role of energy in economic development: the case of Saudi Arabian** **6.1- Importance of different type of energy in Saudi economy.** **6.2- Saudi economy and energy over history.** **6.3- Prospect view of the demand on energy in the future of Saudi Arabia.**	**9**
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	**Describe the arising issues in energy markets globally and in Saudi Arabia in particular**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
1.2	**Define types of energy and appraising problems related to energy matters**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
2.0	**Skills:**		
2.1	**Analyze resources markets and understand the limitations of models.**	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**
2.2	**Design a related energy topic of your choice to present to the class.**	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**
3.0	**Values:**		
3.1	**Demonstrate the theory of energy markets and critically engage with market design issues and policy questions.**	- **Class discussions** - **Essay/projects/reports** - **Group/Team work**	- **Class participation** - **self-evaluations** - **Essays/projects/reports writing** - **Dissertation project**
3.2	**Demonstrate the economics of climate**	- **Class discussions** - **Essay/projects/reports**	- **Class participation** - **self-evaluations**

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	change and ethical questions that a raise.	- Group/Team work	- Essays/projects/reports writing - Dissertation project

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	During the whole semester	10%
2	Class participation	During the whole semester	10%
3	Assignments /projects/reports	During the whole semester	10%
4	Midterm Exam	8th	30%
5	Final Exam	16th	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Kalicki, J.H. and D.L. Goldwyn, 2013. Energy & Security: Strategies for a World in Transition. Woodrow Wilson Center Press. (K&G).**
Essential References Materials	Viscusi, W. K., J. M. Vernon, and J.E. Harrington, 2005. Economics of Regulation and Antitrust, 4th Edition. MIT Press. (VHV).
Electronic Materials	**https://en.wikipedia.org/wiki/RePEc** **http://www.e-elgar.com/shop/isbn/9781852785802** **https://web.archive.org/web/20141207140146/http://www.nbr.org/publications/issue.aspx?id=306**
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources	**NA**

Item	Resources
(Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**Energy Projects Management**
Course Code:	**0605-713**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☐
3. Level/year at which this course is offered: Level 3 / 2ed year
4. Pre-requisites for this course (if any)**:** **None**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

Project management is important for any business organization, but particularly so for the energy industry. Sufficient controls are needed during initiation, study, implementation, and closeout of any energy project, and project managers within the energy environment (such as oil, gas, nuclear) face unique challenges and important risk management considerations.

2. Course Main Objective

This course will expose students to best project management practices within the context of the energy industry.

Course Objectives:

- **Identify the theories of energy project management, principles and concepts.**
- **Recognize the importance of project management in energy economics in practice.**
- **Understand the main topics of projects management, such as project planning and scheduling, project leading, project team, project organizing, resources allocation, project controlling in the context of energy projects.**
- **Recognize the status of project management within the organization and its relationship with other departments.**

Recognize the stages of project implementation

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Describe and define energy project management techniques, team leadership and the division of tasks, and plan the sequence of tasks in the work breakdown structure.	K1 ; K2
1.2	Recognize project budget and the right way to allocate resources.	K3
2	**Skills :**	
2.1	Explain how to conclude the project by summarizing all the steps needed.	S1
2.2	Demonstrate the ability to analysis and conclusion.	S2
3	**Values:**	
3.1	Demonstrate the better acquisition of techniques and objective discussion brainstorm.	V1 ; V2
3.2	Demonstrate and illustrate the development of critical thinking.	V3

C. Course Content

No	List of Topics	Contact Hours
1	*1* **How to Manage Oil and Gas Projects** 1.1 The Principal of Project Management 1.2 Project Characteristics 1.3 Project Life Cycle 1.4 Is this Project Successful?	**6**
2	**2 Project Economic Analysis** 2.1 Introduction **2.2** Project Cash Flow 2.3 Depreciation Methods 2.3.1.1 Straight-Line Method 2.3.1.2 Declining-Balance Method 2.3.1.3 Sum-of-the-Year-Digits 2.3.1.4 Sinking-Fund Method 2.3.1.5 Service-Out Method 2.4 Method of Net Present Value (NPV)	**6**
3	**3 Project planning and Scheduling** 3.1. Introduction to project planning 3.2. The stages of project planning (Scoping; Estimation; Risk Analysis; Scheduling; Controlling strategy) 3.3. Tools and techniques for the planner	**6**
4	**4 Critical Path Method for Oil and Gas Project** 4.1 Activity Networks. 4.2 Critical Path Method (Rule 1,Rule 2,Rule 3…) 4.3 CPM Example 4.4 Forward Pass and Backward Pass 4.5 The Critical Path 4.6 Gantt Charts	**6**

	4.7 Schedule Compression	
5	**5 Program Evaluation and Review Technique** 5.1 PERT Formulas 5.2 PERT Example 5.3 Precedence Diagramming Method 5.4 Work Rate Analysis 5.5 Work Rate Examples 5.6 A Fuel Consumption Rate Example 5.7 Team Work Rate Analysis	**6**
6	**6 The project budget** 6.1. Managing project costs 6.2. Estimating project costs 6.3. Calculating the total budget 6.4. Monitoring project expenditure	**3**
7	**7 Resource allocation** 7.1. Resources in project management 7.2. Resource allocation plan 7.3. Resource leveling 7.4. Techniques for avoiding resource overload	**3**
8	**8 Control** 8.1. Status control 8.2. Analysis 8.3. Management decisions	**3**
9	**9. New Approach in Managing Oil and Gas Projects** 9.1 Introduction 9.2 Quality System 9.3 ISO 9000 9.4 Quality Management Requirements	**3**
10	**10 Monitoring and concluding the project** 10.1. Monitoring project performance and risks 10.2. Discovering and solving problems 10.3. Close out the project	**3**
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Describe and define energy project management techniques, team leadership and the division of tasks, and plan the sequence of tasks in the work breakdown structure.	Lectures Directed readings Class discussions	Class participation Assignments Quizzes Mid-term exam(s) Final exam

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Recognize project budget and the right way to allocate resources.	- Lectures - Directed readings - Class discussions	- Class participation - Assignments - Quizzes - Mid-term exam(s) - Final exam
2.0	**Skills**		
2.1	- Explain how to conclude the project by summarizing all the steps needed.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project
2.2	- Demonstrate the ability to analysis and conclusion.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project
3.0	**Values**		
3.1	- Demonstrate the better acquisition of techniques and objective discussion brainstorm.	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project
3.2	- Demonstrate and illustrate the development of critical thinking.	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	**Quizzes**	**During the whole semester**	**10%**
2	**Class participation**	**During the whole semester**	**10%**
3	**Assignments /projects/reports**	**During the whole semester**	**10%**
4	**Midterm Exam**	**8th**	**30%**
5	**Final Exam**	**16th**	**40%**

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Bennetp. Lientz, Kathryn p. Rea, Project Management for The 1st Century, Third Edition, Academic Press, 2009.
Essential References Materials	Badiru, A. B., & Osisanya, S. O. (2016). Project management for the oil and gas industry: a world system approach. CRC Press. El-Reedy, M. A. (2016). Project Management in the Oil and Gas Industry. John Wiley & Sons.
Electronic Materials	http://www.energy.gov.za/EEE/Projects
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office**	**Direct**

Evaluation Areas/Issues	Evaluators	Evaluation Methods
	- **Deanship of Development and Quality Assurance.**	
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**ENVIRONMENTAL ECONOMICS**
Course Code:	**0605-725**
Program:	**Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours: 3
2. Course type ☐ Required ☒ Elective
3. Level/year at which this course is offered: Level One/Second Semester
4. Pre-requisites for this course (if any)**: None**
5. Co-requisites for this course (if any)**: Energy economics and policy (0605-621), Microeconomics I (0605-611), Macroeconomics (0605-613).**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	٣	%١٠٠
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
1	**Lecture**	45
2	**Laboratory/Studio**	
3	**Seminars**	
4	**Others** (specify)	
Total		

B. Course Objectives and Learning Outcomes

1. Course Description

Provide students with knowledge on the most important environmental problems and their interpretation from an economic perspective. Furthermore, the analytical techniques for assessing the economic value of the environment. Additionally, the principles, rules and procedures of sustainable development from an economic view. Also, the theory and foundations of environmental policy analysis. While these goals aim to provide students with a range of knowledge related to the terminology, methodology, principles and theories of environmental economics, they also attempt to develop in students the ability to apply the information and knowledge learned in Economics in specific situations and problems of the new economic context. However, the instruments provided in the Environmental Economics subject will become a useful tool in their future professional development.

2. Course Main Objective

On successful completion of this course, students should be able to:

- Define major environmental problem.
- Discuss various type of environmental issues.
- Analyze the environmental problems.
- Identify the role of the environmental policy.
- Exercise the impact of the environmental policy over the economy.

3. Course Learning Outcomes

Course Learning Outcomes (CLOs)		Aligned PLOs*
1	**Knowledge and Understanding**	
1.1	Describe the arising problems in Environmental	
1.2	Recall solutions for the Environmental problems	
2	**Skills :**	
2.1	Analyzing theoretical knowledge in Environmental	
2.2	Compare research (preparing, carrying out, writing) in Environmental	
2.3	Recall the knowledge Creativity in using analytical tools in Environmental	
3	**Values:**	
3.1	Participating in finding constructive solutions for some society issues	
3.2	Commitment and responsible citizenship	

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	Introduction	6
2	Markets and the Environment	9
3	Valuing the Environment: Methods	6
4	Economic Growth, the Environment and Sustainable Development	6
5	The Economics of Climate Change	9
6	The Economics of Water Pollution	9
Total		٤٥

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Describe the arising problems in Environmental	• Lecturing • Presentations • Group/Team work	• Class participation • Quizzes • Mid-term exam(s) • End-term exam
1.2	Recall solutions for the Environmental problems	• Lecturing • Presentations • Group/Team work	• Class participation • Quizzes • Mid-term exam(s) • End-term exam
2.0	**Skills**		
2.1	Analyzing theoretical knowledge in Environmental	• Lecturing • Presentations • Group/Team work	• Class participation • Mid-term exam(s) • End-term exam
2.2	Compare research (preparing, carrying out, writing) in Environmental	• Lecturing • Presentations • Group/Team work	• Class participation • Group/Team work • Quizzes • Mid-term exam(s) • End-term exam
3.3	Recall the knowledge Creativity in using analytical tools in Environmental	• Lecturing • Presentations	• Class participation • Mid-term exam(s)

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		• Group/Team work	• End-term exam
3.0	**Values**		
3.1	Participating in finding constructive solutions for some society issues	• Individual Presentation	• Assessment
3.2	Commitment and responsible citizenship	• Individual Presentation	• Assessment

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes (2*5%)	5th, 9th	10%
2	Mid Term Exam	8th	30%
3	Presentation and oral exams	14th	10%
4	Group Report	15th	10%
5	Final Exam	16th	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

3 hours/week

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	- Hanley, N., Shogren, J., & White, B. (2013). Introduction to environmental economics. Oxford University Press.
Essential Reference Materials	- Keohane, N. O., & Olmstead, S. M. (2007). Markets and the Environment. Washington: Island Press. - Tietenberg, T. H., & Lewis, L. (2016). Environmental and natural resource economics. Routledge.
Electronic Materials	- EconLit, JSTOR, American Environmental Agency website and European Environmental Agency.
Other Learning Materials	- Eviews and SPSS.

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Lecture room equipped with white board and fillip chart
Technology Resources (AV, data show, Smart Board, software, etc.)	• Wireless internet • Data show • Smart board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N. A.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students and Faculty	Direct
Extent of achievement of course learning outcomes	Peer Reviewer	Direct
Quality of learning resources	Program and Faculty	Indirect

Evaluation Areas/Issues (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date:	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**International Energy Economics**
Course Code:	**0605-714**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:3
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☐
3. Level/year at which this course is offered: **Level 1 / 2ed year**
4. Pre-requisites for this course (if any)**:** **Microeconomics I**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	**45**	**100**
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**45**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	**45**

B. Course Objectives and Learning Outcomes

1. Course Description

The course aims to analyze the current structures and trends of the global energy sectors and its future projection around the world. This course will provide the students with an understanding of the international market of energy in board definition.

2. Course Main Objective

First: To provide the student with a deeper understanding for the applications of macroeconomic analysis to international economy of energy, with particular emphasis on the market mechanism.

Second: To provide the proper methods that would enable the student to analyze the effects of various policies on the energy market and to raise his or her ability to understand and deal with the various energy market issues and problems that face the global economy such economics world shocks, global economy structure change and world economic energy demand and supply.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Use economic analysis to understand issues in the international energy industry.	**K1**
1.2	Explain what forces are driving the international energy industry, market and players.	**K2**
2	**Skills :**	
2.1	Critically evaluate information and critically analyze issues relating to the international energy sector, informed by developments at the forefront of the subject	**S1**
2.2	Explain international energy market systems and the international organizations the related to the energy production and markets	**S2 and S3**
3	**Values:**	
3.1	Enhancing the climate of dialogue, encouraging innovation and promoting social responsibility	**V1**
3.2	Stimulate the spirit of initiative and creativity	**V2 and V2**

C. Course Content

No	List of Topics	Contact Hours
1	**1. Overview of the Global Energy Outlook** 1.1 Energy Demand Analysis 1.2 Energy Markets Forecasting 1.3 Energy supply and demand balance 1.4 Global energy investments 1.5 Energy Technologies and Economics	**9**
2	**2. Effect of Subsidies and Taxation** 2.1 Taxes on fossil fuels 2.2 Effects of fossil fuel subsidies on growth, the environment 2.3 Impact of fossil energy sources on renewable energy markets	**6**
3	**3. The International Oil Industry** 3.1 Competitive oil markets 3.2 Oil pricing power and constrains	**9**
4	**4. Natural Gas, The Nuclear Industry, Renewable Energy** 4.1 Development of renewable energy markets 4.2 Investments and markets of Gas, nuclear and renewable energy 4.3 Emerging markets of gas, nuclear and renewable energy in the world, Middle east, Asia and Europe.	**9**
5	**5. Implications of Climate Change for the Energy Industry** 5.1 Climate change negotiations 5.2 Emission reduction options 5.3 Benefits and risks in energy industry	**6**
6	**6. Energy Pricing and Trading in Financial Markets** 6.1 Financial markets' characteristics 6.2 Energy data source and energy financial data trends and models 6.3 Exchange rates, assets and interest rate impacts on energy markets	**6**
	Total	45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Use economic analysis to understand issues in the international energy industry.	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
1.2	Explain what forces are driving the international energy industry, market and players.	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
2.0	**Skills**		
2.1	Critically evaluate information and critically analyze issues relating to the international energy sector, informed by developments at the forefront of the subject	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**
2.2	Explain international energy market systems and the international organizations the related to the energy production and markets	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**
3.0	**Values**		
3.1	**Enhancing the climate of dialogue, encouraging innovation and promoting social responsibility .**	- **Class discussions** - **Essay/projects/reports** - **Group/Team work**	- **Class participation** - **self-evaluations** - **Essays/projects/reports writing** - **Dissertation project**
3.2	Stimulate the spirit of initiative and creativity	- **Class discussions** - **Essay/projects/reports** - **Group/Team work**	- **Class participation** - **self-evaluations** - **Essays/projects/reports writing** - **Dissertation project**

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	**Participation and Homework**	**During the whole semester**	**10%**
2	**Midterm Exams**	**10th**	**30%**

#	Assessment task*	Week Due	Percentage of Total Assessment Score
3	Project	14th	20%
4	Final Exam	End of the semester	40%
5			
6			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Dahl, C. (2004) International Energy Markets: Understanding Pricing, Policies and Profits, published by PennWell.**
Essential References Materials	**Bhattacharyya, S. (2011) Energy Economics: Concepts, Issues, Markets and Governance, published by Springer-Verlag.** **Helm, D. (2007) The New Energy Paradigm published by Oxford University Press.** **Sterner, T. (Ed.). (1992). International Energy Economics. Springer Science & Business Media.**
Electronic Materials	**OPEC** **The World Energy Council https://www.worldenergy.org/** **International Energy Agency**
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**MACROECONOMICS**
Course Code:	**0605-1613**
Program:	**Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours: 3
2. Course type ☒ Required ☐ Elective
3. Level/year at which this course is offered: Level One/First Semester
4. Pre-requisites for this course (if any)**: None**
5. Co-requisites for this course (if any)**: None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	٣	%١٠٠
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
1	**Lecture**	45
2	**Laboratory/Studio**	
3	**Seminars**	
4	**Others** (specify)	
Total		

B. Course Objectives and Learning Outcomes

1. Course Description

The purpose of this course is to introduce students the main macroeconomic concepts and familiarize them with the application of these concepts in the modern economy. Students will also learn basics of macroeconomics analysis, which will help them to understand the courses in the following semesters better.

2. Course Main Objective

On successful completion of this course, students should be able to:

- Define the basic economic concepts related to macroeconomics such as scarcity, choice, opportunity costs, and production possibilities curve and describe the economic problem.
- Define and measure the national income, unemployment and inflation rates.
- Identify the causes and consequences of business cycles.
- Explain how aggregate demand and aggregate supply interact to drive a free market economy.
- Define what is money and its role and functions in the economy.
- Explain the roles of monetary policy and fiscal policy in fighting recessions, unemployment and inflation.
- Analyze the effects of trade barriers such as the tariffs and quotas on the growth of international trade.

3. Course Learning Outcomes

	Course Learning Outcomes (CLOs)	Aligned PLOs*
1	**Knowledge and Understanding**	
1.1	To list the ten principles of economics	
1.2	Define the economic problem and explain how economists use economic models	
1.3	Describe the relationships among GDP, net domestic product, national income, personal income, and disposable income	
1.4	Recognize causes of fluctuations in aggregate demand and aggregate supply and the implications of these fluctuations	
1.5	Understand how macroeconomic policies affect GDP, prices level and the economic growth	
1.6	Memorize economic development and relate productivity growth to improvements in the standards of living	
1.7	Learn the meaning of absolute advantage	
2	**Skills :**	
2.1	Explain how economists use economic models	
2.2	Calculate GDP, GNP, net national product, national income, personal income, and disposable income	
2.3	Differentiate between nominal GDP and real GDP	
2.4	Compare and contrast expansionary and contractionary monetary and fiscal policies	
3	**Values:**	
3.1	Making independently logical decisions supported by evidence and arguments	
3.2	Demonstrating integrity and professional and academic ethics	

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	Basic concepts and the economic problem	3
2	National accounts and economic growth	6
3	Aggregate supply and aggregate demand	6
4	Macroeconomic equilibrium	6
5	Business cycle, inflation and unemployment	9
6	Money and banking	3
٧	Monetary policy and fiscal policy	6
٨	International economics	3
٩	Economic development	3
Total		٤٥

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	To list the ten principles of economics	Lecture + Video	Quiz
1.2	Define the economic problem and explain how economists use economic models	Lecture	Quiz
1.3	Describe the relationships among GDP, net domestic product, national income, personal income, and disposable income	Lecture + Assignments	Midterm Exam
1.4	Recognize causes of fluctuations in aggregate demand and aggregate supply and the implications of these fluctuations	Lecture + Case Studies	Midterm Exam
1.5	Understand how macroeconomic policies affect GDP, prices level and the economic growth	Lecture + Assignments	Quiz + Final Exam
1.6	Memorize economic development and relate productivity growth to improvements in the standards of living	Lecture + Video Demonstration	Quiz + Final Exam
1.7	Learn the meaning of absolute advantage	Lecture + Case Studies	Quiz + Final Exam
2.0	**Skills**		
2.1	Explain how economists use economic models	Lecture	Quiz
2.2	Calculate GDP, GNP, net national product, national income, personal income, and disposable income	Assignments	Assessment
3.3	Differentiate between nominal GDP and real GDP	Case Studies	Midterm Exam
3.4	Compare and contrast expansionary and contractionary monetary and fiscal policies	Lecture + Case Studies	Final Exam
3.0	**Values**		
3.1	Making independently logical decisions supported by evidence and arguments	Individual Presentation	Assessment
3.2	Demonstrating integrity and professional and academic ethics	Individual Presentation	Assessment

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz # 1	4th	6%
2	Quiz # 2	11th	6%
3	Quiz # 3	14th	6%
4	Class Assignments and Activities	-	12%
5	Midterm exam	8th	30%
6	Final exam	End of semester	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:
3 hours/week

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	- Gregory Mankiw: *Principles of Macroeconomics*, 7th ed., Worth Publishers; New York, USA, 2014.
Essential Reference Materials	- Parkin, M. (2015). Macroeconomics. Pearson. - Olivier Blanchard and David R. Johnson (2013). Macroeconomics 6th Edition. Pearson.
Electronic Materials	• https://youtu.be/PXJvyHe1aZkhttps • https://youtu.be/PzAr_mL0Qd8 • https://youtu.be/u5P8AZRBLac • https://youtu.be/B8z6XS2jieE • https://youtu.be/wdKBfXRpNsk
Other Learning Materials	- Microsoft office - Greg Mankiw's Blog: Choosing a Graduate Program: https://gregmankiw.blogspot.com/.../choosing-graduate-program.htm...

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Lecture room equipped with white board and fillip chart
Technology Resources (AV, data show, Smart Board, software, etc.)	• Wireless internet • Data show • Smart board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N. A.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students and Faculty	Direct
Extent of achievement of course learning outcomes	Peer Reviewer	Direct
Quality of learning resources	Program and Faculty	Indirect

Evaluation Areas/Issues (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date:	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**MICROECONOMICS II**
Course Code:	**0605-623**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☐
3. Level/year at which this course is offered: **Level 1 / 2ed year**
4. Pre-requisites for this course (if any)**:** **Microeconomics I**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	**45**	**100**
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**45**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	**45**

B. Course Objectives and Learning Outcomes

1. Course Description

This course extends the analysis of Microeconomics I to situations with strategic interactions, that is, of economic situations where the choice of an agent has an impact on the utility of other agents. Microeconomics II focuses on performing a detailed analysis on how the agents make their decisions, on reviewing imperfectly competitive markets and on analyzing market failures and the role of the government.

2. Course Main Objective

At the end of this course, students will be able to:

- **Manage the main tools of microeconomics analysis and to solve standard optimization problems.**
- **Predict the response of the economic agents (consumers, producers and institutions) when the conditions affecting their decision-making process change.**
- **Describe and analyze common microeconomic events.**

Understand the main building blocks of microeconomic theories and will provide them with a necessary toolkit for undertaking further research work in economics.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Describe the difference between partial and general equilibrium analysis and Outline the three conditions necessary for the attainment of economic efficiency**	**K1**
1.2	**Recognize the partial equilibrium; solve for partial equilibrium with perfect competition and under monopoly.**	**K2**
2	**Skills :**	
2.1	**Interpret incentive structures within the economic framework, linking strategy with desired outcome and expectations.**	**S1**
2.2	**Explain the behavioral and strategic foundations of game theoretical approaches**	**S2 and S3**
3	**Values:**	
3.1	**Demonstrate oral and written communication skills.**	**V ٢**
3.2	**Demonstrate leadership capabilities, life-long learning, and research skills in applied energy economics fields**	**V1 and V2**

C. Course Content

No	List of Topics	Contact Hours
Part 1- Consumer Behavior and Market Demand		
1	**Chapter 1.** Consumer Behavior	**1**
2	**Chapter 2.** Individual and Market Demand	**1**
Part 2- Market Structures for Goods and Factor Inputs		
3	**Chapter 3**. Market Power: Monopoly and Monopsony	**2**
4	**Chapter 4.** Pricing with Market Power	**1**
5	**Chapter 5**.Monopolistic Competition and Oligopoly	**2**
6	**Chapter 6.** Game Theory and Competitive Strategy	**1**
7	**Chapter 7.** Markets for Factor Inputs	**2**
Part 3- Partial Equilibrium versus General Equilibrium and Market Failures		
8	**Chapter 8**. Partial Equilibrium	**1**
9	**Chapter 9**. General Equilibrium and Economic Efficiency	**2**
10	**Chapter 10**. Externalities and Public Goods	**2**

Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	**Describe the difference between partial and general equilibrium analysis and Outline the three conditions necessary for the attainment of economic efficiency**	**- Lectures - Directed readings - Class discussions**	**- Class participation - Assignments - Quizzes - Mid-term exam(s) - Final exam**
1.2	**Recognize the partial equilibrium; solve for partial equilibrium with perfect competition and under monopoly.**	**- Lectures - Directed readings - Class discussions**	**- Class participation - Assignments - Quizzes - Mid-term exam(s) - Final exam**
2.0	**Skills**		
2.1	**Interpret incentive structures within the economic framework, linking strategy with desired outcome and expectations.**	**- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications**	**- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project**
2.2	**Explain the behavioral and strategic foundations of game theoretical approaches**	**- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications**	**- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project**
3.0	**Values**		
3.1	**Demonstrate oral and written communication skills.**	**- Class discussions - Essay/projects/reports - Group/Team work**	**- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project**
3.2	**Demonstrate leadership capabilities, life-long learning, and research skills in applied energy economics fields**	**- Class discussions - Essay/projects/reports - Group/Team work**	**- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project**

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	During the whole semester	10%
2	Class participation	During the whole semester	10%
3	Assignments	During the whole semester	10%
4	Midterm Exam	8th	30%
5	Final Exam	16th	40%
6			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice : **4 weekly office hours**

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Nicholson, W. and Snyder, S. (2011): Microeconomic Theory: Basic Principles and Extensions, 11th edition.**
Essential References Materials	• **Microeconomics, by Robert S. Pindyck and Daniel L. Rubinfeld (2009) principles and extensions. Nelson Education.** • **Gans, J., King, S., & Mankiw, N. G. (2011). Principles of microeconomics. Cengage Learning.**
Electronic Materials	**http://www.sama.gov.sa/** **https://learn.saylor.org/course/** **http://data.worldbank.org/** **http://www.blackboard.com/Platforms/**
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**MICROECONOMICS I**
Course Code:	**0605-611**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☐
3. Level/year at which this course is offered: **Level 1 / 1st year**
4. Pre-requisites for this course (if any)**:** **None**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	٤٥	١٠٠
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

The Microeconomics I is an introductory undergraduate course that teaches the fundamentals of microeconomics. This course introduces microeconomic concepts and analysis, supply and demand analysis, theories of the firm and individual behavior, competition and monopoly, and Demand for Factors of Production.

2. Course Main Objective

The main objective of this course is to orient students about the significant impact of Microeconomics.

Course Objectives

At the end of this course, students will be able to:

- **Provide an introduction to the economic way of thinking and to the economist's view of the world.**
- **Attempts to develop a student's ability to think analytically about the economic forces at work in society.**

Students learn both a specific set of analytical tools and how to apply them to current policy issues.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Memorize the required theoretical background at the micro levels of the economy**	**K1**
1.2	**Recognize the application of the theories in the different fields of economics**	**K2**
2	**Skills :**	
2.1	**Justify approaches to identifying analyzing and solving a variety economic problem.**	**S1**
2.2	**Use microeconomic concepts and methods to analyze and interpret real-world microeconomic phenomena, and to assess issues of microeconomic policy.**	**S2 and S3**
3	**Values:**	
3.1	**Demonstrate an absolute commitment to ethical, professional, and societal responsibilities.**	**V3**
3.2	**Demonstrate leadership capabilities, life-long learning, and research skills in applied energy economics fields**	**V1 and V2**

C. Course Content

No	List of Topics	Contact Hours
1	**1- What is Economics** **1-1 Economics Defined** **1-2 Macroeconomics versus Microeconomics**	**3**
2	**2- The Economics Problem** **2-1 Resources** **2-2 Scarcity** **2-3 Opportunity Cost** **2-4 Production Possibilities Frontier**	**3**
3	**3- Demand and Supply Theory** **3-1 Demand Law** **3-2 Changes in demand vs. changes in quantity demanded** **3-3 Supply Law** **3-4 Changes in supply vs. changes in quantity supplied** **3-5 Market equilibrium**	**6**
4	**4- Elasticity of Demand and Supply** **4-1 Price Elasticity of Demand** **4-2 Income Elasticity of Demand** **4-3Cross-Elasticity of Demand** **4-4 Price Elasticity of Supply**	**6**
5	**5- Production Theory** **5-1 Short Run vs. Long Run Production** **5-2 Law of Diminishing Marginal Productivity or Returns**	**3**
6	**6- Cost Theory** **6-1 Short Run vs. Long Run Cost** **6-2 Economies of Scale**	**3**
7	**7- Perfect Competition** **7-1 Basic Concepts** **7-2 The Expanded Concepts**	**6**

	7-3 Equilibrium in Perfect Competition	
8	8- Pure Monopoly 8-1 Overview 8-2 The Nature of Monopoly and It's Types	3
9	9- Monopolistic Competition and Oligopoly 9-1 Basic Concepts 9-2 Equilibrium in Competition 9-3 Equilibrium in Oligopoly	6
10	10- Demand for Factors of Production 10-1 Important Concepts 10-2 Profit Maximization 10-3 Cost Minimization	3
11	11- Selected Topics 11-1 Public goods 11-2 Bubble prices 11-3 Crime economies	3
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Memorize the required theoretical background at the micro levels of the economy	- Lectures - Directed readings - Class discussions	- Class participation - Assignments - Quizzes - Mid-term exam(s) - Final exam
1.2	Recognize the application of the theories in the different fields of economics	- Lectures - Directed readings - Class discussions	- Class participation - Assignments - Quizzes - Mid-term exam(s) - Final exam
2.0	**Skills**		
2.1	Justify approaches to identifying analyzing and solving a variety economic problem.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project
2.2	Use microeconomic concepts and methods to analyze and interpret real-world microeconomic phenomena, and to assess issues of microeconomic policy.	- Lectures - Essay - Presentations - Online material - Directed readings - problem solving exercise - Lab applications	- Assignments - Essays/projects/reports writing - Quizzes - Mid-term exam(s) - Final exam - Dissertation project

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.0	Values		
3.1	Demonstrate an absolute commitment to ethical, professional, and societal responsibilities.	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project
3.2	Demonstrate leadership capabilities, life-long learning, and research skills in applied energy economics fields	- Class discussions - Essay/projects/reports - Group/Team work	- Class participation - self-evaluations - Essays/projects/reports writing - Dissertation project

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	During the whole semester	١٠%
2	Class participation	During the whole semester	١٠%
3	Assignments /projects/reports	During the whole semester	10%
4	Midterm Exam	٨th	30%
5	Final Exam	16th	٤0%
6	Quizzes	During the whole semester	١٠%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Mankiw N.G (2017). Principles of Microeconomics. South-Western College Publisher.
Essential References Materials	• AEAweb: American Economic Journal: Microeconomics • Nicholson, W., & Snyder, C. M. (2011). Microeconomic theory: Basic principles and extensions. Nelson Education. • Gans, J., King, S., & Mankiw, N. G. (2011). Principles of microeconomics. Cengage Learning.
Electronic Materials	http://www.sama.gov.sa/ https://learn.saylor.org/course/ http://data.worldbank.org/ http://www.blackboard.com/Platforms/

Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**Petroleum economics**
Course Code:	**0605-722**
Program:	**MSc. Applied Energy Economics**
Department:	**Economics**
College:	**School of Business**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours:3
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☐ Elective ☐
3. Level/year at which this course is offered: **Level 4 / 2ed year**
4. Pre-requisites for this course (if any)**:** **Microeconomics II (**0605-623**) and Macroeconomics (**0605-613**)**
5. Co-requisites for this course (if any)**:** **None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	**45**	**100**
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**45**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	**45**

B. Course Objectives and Learning Outcomes

1. Course Description

This course covers petroleum science, economics and management science, which can be used to analyze oil resource, oil markets, oil companies, governments and organizations, as well as international petroleum corperation. Oil price determination is discussed with detailed consideration of the special characteristics of the demand and supply curves in the industry. The role of OPEC in the market is examined, including discussion of the various models of OPEC behavior and the determinants of its market power. The economics of climate change and the place of renewable energy in the wider energy market is discussed.

2. Course Main Objective

The main purpose of this course is to orient students about the significant impact of Microeconomics.

Course Objectives

At the end of this course, students will be able to:

- **apply the simple analytics of oil price determination to historical international oil prices;**

- **become familiar with major sources of data on the international petroleum industry;**
- **become familiar with the petroleum-refining sector, the transportation of petroleum products, and the market for finished products in an international context.**

to take up a position requiring multidisciplinary skills in the energy sector.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Reproduce the basic economic concepts underlying petroleum production and use**	**K1**
1.2	**Outline the major events and developments in the history of the petroleum industry, and the development of the price of oil up until today.**	**K2**
2	**Skills :**	
2.1	**Explain how local, regional, and global policies and institutions affect energy markets and prices.**	**S1 and S3**
2.2	**Analyze the interaction between petroleum and other energy resources in the market, and explain how this interaction can be affected by environmental and climate policies.**	**S2**
3	**Values:**	
3.1	**Criticize public energy-related policies and evaluate current industrial practices regarding the use of natural resources and its environmental effects.**	**V1**
3.2	**Demonstrate oral and written communication skills.**	**V ٢**

C. Course Content

No	List of Topics	Contact Hours
1	**Chapter 1. Crude oil supply and demand** 1. The crude oil market. 2. Technical cost of exploration and production. 3. Taxes and legal aspects.	**6**
2	**Chapter 2. The economics of crude oil transportation.** 1. Transportation by tanker. 2. Crude oil pipelining.	**6**
3	**Chapter 3. Finished products supply: refining.** 1. The search for optimal economic conditions. 2. Present unit location and cost of refinery processing. 3. Legal organization.	**6**
4	**Chapter 4. Demand and marketing of petroleum products**. 1. The petroleum products in the principal consuming countries. 2. The distribution of petroleum products. 3. The marketing of petroleum products.	**6**

5	**Chapter 5. Peak oil theory and forecast models** 1. Rising and impact of Peak oil theory 2. The application of Peak oil forecast models	**6**
6	**Chapter 6. Government and organization** 1. The function of Government in oil industry 2. The governmental oil and energy organizations in the world	**6**
7	**Chapter 7. International oil cooperation and contract** 1. The forms of oil Cooperation 2. The types of oil contracts and economic evaluation 3. Comparison of different countries' tax systems	**6**
8	**Chapter 8. Energy and the environment** 1. Climate regulations and energy markets	**3**
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	**Reproduce the basic economic concepts underlying petroleum production and use**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
1.2	**Outline the major events and developments in the history of the petroleum industry, and the development of the price of oil up until today.**	- **Lectures** - **Directed readings** - **Class discussions**	- **Class participation** - **Assignments** - **Quizzes** - **Mid-term exam(s)** - **Final exam**
2.0	**Skills**		
2.1	**Explain how local, regional, and global policies and institutions affect energy markets and prices.**	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**
2.2	**Analyze the interaction between petroleum and other energy resources in the market, and explain how this interaction can be affected by environmental and climate policies.**	- **Lectures** - **Essay** - **Presentations** - **Online material** - **Directed readings** - **problem solving exercise** - **Lab applications**	- **Assignments** - **Essays/projects/reports writing** - **Quizzes** - **Mid-term exam(s)** - **Final exam** - **Dissertation project**

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.0	**Values**		
3.1	**Criticize public energy-related policies and evaluate current industrial practices regarding the use of natural resources and its environmental effects.**	- **Class discussions** - **Essay/projects/reports** - **Group/Team work**	- **Class participation** - **self-evaluations** - **Essays/projects/reports writing** - **Dissertation project**
3.2	**Demonstrate oral and written communication skills.**	- **Class discussions** - **Essay/projects/reports** - **Group/Team work**	- **Class participation** - **self-evaluations** - **Essays/projects/reports writing** - **Dissertation project**

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	**Quizzes**	**During the whole semester**	**١٠%**
2	**Class participation**	**During the whole semester**	**١٠%**
3	**Assignments**	**During the whole semester**	**10%**
4	**Midterm Exam**	**8th**	**30%**
5	**Final Exam**	**16th**	**40%**
6			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 weekly office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Al-Nadawi Khudhair Abbas. *Principles of Petroleum Economics*. Lambert Academic Publishing. 2013.**
Essential References Materials	Dr. Mohan G. Kelkar. Petroleum Economics and Project Evaluation. 2013 Hannesson, R. Petroleum Economics. Issues and Strategies. Quorum Books, 1998.

	Masseron, J. Petroleum Economics. 4th Edition TECHNIP. Paris, France. 1990
Electronic Materials	**http://www.sama.gov.sa/** **https://www.opec.org/opec_web/en/** http://irena.org/ **http://data.worldbank.org/** **http://www.blackboard.com/Platforms/**
Other Learning Materials	**NA**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Classroom capacity should be equal or less than 30**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Smart Board, LCD projector, Blackboard/LMS access, e-podium.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**NA**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Annual Program Report	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**
Effectiveness of teaching and assessment	- **Head of the Department** - **Students**	**Direct**
Course evaluation workshops (at the end of each semester)	- **Teaching Staff** - **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course Reports (at the end of each semester)	- **Head of the Department** - **College Quality Assurance Office** - **Deanship of Development and Quality Assurance.**	**Direct**

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Economics Department Council**
Reference No.	**Meeting No. 3 - Academic year 1441/1442 H.**
Date	**Tuesday, 11th November, 2020**