

ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**Course Specifications
(CS)**

APEC 333: Economics of Natural Resources

**Prof. Ahmed M. Elhendy
Instructor**

Course Specifications

Institution King Saud University	Date of Report 25-3-2014
College/Department: College of Food Sciences and Agriculture, Agriculture Economic Department	

A. Course Identification and General Information

1. Course title and code: APEC333: Economics of Natural Resources			
2. Credit hours: 3 Credits			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs) Applied Economics			
4. Name of faculty member responsible for the course Prof. Ahmed M. Elhendy			
5. Level/year at which this course is offered: sixth level/ third year			
6. Pre-requisites for this course (if any) APEC 216- Applied Quantitative Analysis			
7. Co-requisites for this course (if any) N/A			
8. Location if not on main campus N/A			
9. Mode of Instruction (mark all that apply)			
a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="60%"/>
b. Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="40%"/>
c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>
d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>
f. Other	<input type="checkbox"/>	What percentage?	<input type="text"/>
Comments:			

B Objectives

<p>1. What is the main purpose for this course?</p> <ul style="list-style-type: none"> • Introduce the basic theory and application of natural resource use. • Optimize the use of resources from both economic and biological point of views • The course aims to improve student skills with basic knowledge of science, economics, various methods of planning, organization and follow-up and control of resource stock management, and how to deal with the problems and make decisions appropriate to use such resources. And provide students with foundations of knowledge and skills that qualify them to manage projects of resource extraction.
<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)</p> <ul style="list-style-type: none"> • Continuing to develop the curriculum and make it consistent with the variables of good specialization is focused on the uses of computers in analysis and training for students. • Modernization of infrastructure and programs continued. Develop the experience of different ways of teaching (distance, automatic, traditional etc.) • Use of information technology through internet that contain exercises and practical applications of the decision. • Update books and references used in the teaching of the decision • Providing updated software and infrastructure. • Trying different ways of teaching to determine effectiveness.

C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Introduction to course objectives and contents with explanations of the main concepts used with natural resource economics.	1	2
Classification and distribution of natural resources and its main characters, and the concept of resource scarcity .	2	4
The theory of natural resource supply and demand with special reference to the market of natural resources.	2	4
The economic rules for natural resources optimal use	2	4
Land and water resource economics	2	4
Fishery and range resource economics	2	4
Energy and mineral resource economics	2	4
Wild life and recreation economics	2	4
Total	15	30 hours

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory (Computer lab.)	Practical	Other:	Total
Contact Hours	15hours	N/A	15hours	N/A	N/A	30 hours
Credit	2	N/A	1	N/A	N/A	3Credits

3. Additional private study/learning hours expected for students per week.	NA
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4. Course Learning Outcomes in National Qualification Framework (NQF) Domains of Learning and Alignment with Assessment Methods and Teaching Strategy
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Course Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning, assessment, and teaching.

The **National Qualification Framework** provides five learning domains. Course learning outcomes are required. Normally a course has should not exceed eight learning outcomes which align with one or more of the five learning domains. Some courses have one or more program learning outcomes integrated into the course learning outcomes to demonstrate program learning outcome alignment. The program learning outcome matrix map identifies which program learning outcomes are incorporated into specific courses.

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. **Fourth**, if any program learning outcomes are included in the course learning outcomes, place the @ symbol next to it.

Every course is not required to include learning outcomes from each domain.

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Student will <u>memorize</u> and <u>recognize</u> different economic rules among the different economic applications to be used for solving natural resource problems	In-class lecturing where the previous knowledge is linked to the current one and future topics	Mid term and final exams, in addition to report writing.
1.2	Applying such economic rules with different natural resources will <u>reproduce</u> creative problem solutions	Homework assignments	Student reports presentation about natural resource economics
1.3	Student must be aware with research results and its application in natural resource economics. Data result <u>records</u> would be <u>recalled</u> for field applications.	Tutorial discussions	Computer lab evaluation report for assignments
1.4	The benefit of student applications in scientific research, would help student to <u>memorize</u> the relation between economic theory and its applications. Student knowledge can <u>reproduce</u> and <u>recall</u> examples and training materials for written reports.	Help student to follow up course materials over time.	Written Reports and Pop-up exams
2.0	Cognitive Skills		
2.1	<u>Develop</u> the student ability to <u>recognize</u> problem data and <u>prepare</u> collected data to be <u>judged</u> .	Collecting data about one of natural resources problems such as (Over fishing problem)	Assignments and computer applications. Midterm and final exams
2.2	<u>Prepare</u> student to use different information sources, such as library, also <u>summarize</u> , <u>reconstruct</u> <u>measure</u> , and <u>judge</u> the accuracy of information available about natural resource economics.	Collecting statistical data about natural resources from different resources of information's	Student reports presentation about natural resource economics
2.3	<u>Improve</u> student skills in <u>calculate</u> and <u>analyze</u> data <u>collected</u> for different subjects about natural resource economics	preparing data for different economic analysis	Computer lab evaluation report for assignments
2.4	Applying the economic analysis of data and know how the <u>interpret</u> and <u>judge</u> the final results. <u>Evaluate</u> the final results of analysis and <u>plan</u> for apply its recommendations	Presentation of assignment results to the class	Presentation evaluation and assignment with final exam grades
3.0	Interpersonal Skills & Responsibility		
3.1	Help student to <u>demonstrate</u> , <u>evaluate</u> , and <u>analyze</u> economic problems independently and as a	Conducting group assignment and writing group reports (working in	Group and single student reports and assignments assessments

	member of working team.	groups)	
3.2	<u>Show</u> the importance of time <u>use</u> by the student and his group or team through class activities.	Open discussions (oral) for time management in doing class assignment .	Open discussions evaluation by teacher
3.3	<u>Demonstrate</u> the student Improvement in communication skills through oral discussions and <u>written</u> reports. Help student to <u>judge</u> and <u>evaluate</u> different tools of economic analysis in area of natural resource economics.	Homework for applying computer software in related subjects.	Class exam for computer lab materials. Applying different computer soft-wares.
4.0	Communication, Information Technology, Numerical		
4.1	Learn how to calculate and assess primarily data to be used by computer for processing and analyzing.	Solving problems using computer.	Assessment of student computer assignments.
4.2	<u>Operate</u> different computational tools (computer software's), and <u>assess</u> its applicability in economic problems of natural resources. Also, student has to <u>criticize research</u> results analyses and its applications.	Count different data types from primary and secondary data for economic purpose - marginal product of natural resource	Assessment of student numerical and communication skills.
4.3	Report writing	Incorporate the use of computer in report writing	Evaluate student report writing
4.4	Using new visual tools for presentation of his report results.	Lectures.	Assess the student visual presentation of his report.
5.0	Psychomotor Not applicable (NA)		
5.1			
5.2			

Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching

NQF Learning Domains	Suggested Verbs
Knowledge	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write
Cognitive Skills	estimate, explain, summarize, write, compare, contrast, diagram, subdivide, differentiate, criticize, calculate, analyze, compose, develop, create, prepare, reconstruct, reorganize, summarize, explain, predict, justify, rate, evaluate, plan, design, measure, judge, justify, interpret, appraise
Interpersonal Skills & Responsibility	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write

Communication, Information Technology, Numerical	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize
Psychomotor	demonstrate, show, illustrate, perform, dramatize, employ, manipulate, operate, prepare, produce, draw, diagram, examine, construct, assemble, experiment, and reconstruct

Suggested **verbs not to use** when writing measurable and assessable learning outcomes are as follows:

Consider Maximize Continue Review Ensure Enlarge Understand
Maintain Reflect Examine Strengthen Explore Encourage Deepen

Some of these verbs can be used if tied to specific actions or quantification.

Suggested assessment methods and teaching strategies are:

According to research and best practices, multiple and continuous assessment methods are required to verify student learning. Current trends incorporate a wide range of rubric assessment tools; including web-based student performance systems that apply rubrics, benchmarks, KPIs, and analysis. Rubrics are especially helpful for qualitative evaluation. Differentiated assessment strategies include: exams, portfolios, long and short essays, log books, analytical reports, individual and group presentations, posters, journals, case studies, lab manuals, video analysis, group reports, lab reports, debates, speeches, learning logs, peer evaluations, self-evaluations, videos, graphs, dramatic performances, tables, demonstrations, graphic organizers, discussion forums, interviews, learning contracts, antidotal notes, artwork, KWL charts, and concept mapping.

Differentiated teaching strategies should be selected to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities.

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	First assignment (demand and supply of natural estimation)	3	5%
2	First Mid-term exam	5	10%
3	Oral presentation of student report	6	5%
4	Second assignment (computer applications)	7	5%
5	Writing report submission	8	5%
6	Second Mid-term exam	9	10%
7	Lab exam (computer application for the optimal use of natural resources)	11	20%
8	Final exam	14	40%
		Total	100 %

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)
Individual student consultation and academic advices would be available through meeting with staff member at times of open office hours, email, and phone calls.

E. Learning Resources

1. List Required Textbooks (in Arabic Language)

Al Shikh H. (2007) Economics of natural resources and environment. Al-Obikan press, Riyadh, KSA.
Barry c. Field (2001), Natural Resource Economics, An introduction, McGraw Hill.
MohammedAbed Rabboand MohammadGhozlan, resource economicsand the environment.
AlsiadahIbrahim Mustafa, the principles ofthe economics ofnatural resourcesand the environment.

2. List Essential References Materials (Journals, Reports, etc.)

Statistical Data Periodicals' for Government Ministries (Agriculture , Water, Economic and planning, and others). Such periodicals are available at the King Saud Main Library.

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

Journal of College of Food Sciences and Agriculture, and Journal of Saudi Agriculture Society.
Report about B.Sc. projects of graduation by agriculture Economic Dept. (published already).

4. List Electronic Materials(eg. Web Sites, Social Media, Blackboard, etc.)

Web sites of different ministries and associations such as Saudi Development of Agriculture Fund, Commercial Saudi Chambers ,and King Saud University Library. Student can get all of sites through GOOGLE.

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

Computer labs include all hard and soft ware required for student to do assignments and presentations. Each year, the new version of economic computer programs are set on computer, even that we try to train student to apply his assignment using Excel as it is available on operating system of computers. Using Excel help student to avoid an expensive professional economic programs.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

The distribution of lecturers on classrooms needs more classrooms, especially for period 8am-3pm.

2. Computing resources (AV, data show, Smart Board, software, etc.) Smart Board and projectors are available for lecturers and presentations, also computers and soft- wares are sufficient too.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching <ul style="list-style-type: none">Continuing to develop the curriculum and make it consistent with the variables of good specialization is focused on the uses of computers in analysis and training for students.Modernization of infrastructure and programs continued.Develop the experience of different ways of teaching (distance, automatic, traditional etc.)Use of information technology through internet that contain exercises and practical applications of the decision.
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor Exams, oral presentations, writing reports, computer application assessment, and problem solving homework's.
3 Processes for Improvement of Teaching <ul style="list-style-type: none">Update books and references used in the teaching of the decisionProviding updated software and infrastructure.Trying different ways of teaching to determine effectiveness.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) N/A

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

Each semester,, the quality assurance comity is reviewing course reports for evaluations and suggest ways to improve courses .

Faculty or Teaching Staff: Prof. Ahmed M. Elhendy

Signature: _____ **Date Report Completed: 9/2/2014**

Received by: 20/02/2014

Dean/Department Head

Signature: _____ **Date:** _____