

ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**Course Specifications
(CS)**

APEC 405 Agricultural Production Economics

**Prof. Khalid N.M. Al-rwis
Instructor**

Course Specifications

Institution King Saud University	Date of Report 25/2/2014
College/Department College of Food & agricultural sciences/ Agricultural Economics	

A. Course Identification and General Information

1. Course title and code: APEC 405 Agricultural Production Economics			
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. Khalid N.M. Al-rwis			
5. Level/year at which this course is offered Level 8/fourth year			
6. Pre-requisites for this course (if any) OPER100 : Introduction to Operations Research 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="70%"/>
b. Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="30%"/>
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: The lectures and tutorials are conducted in smart rooms and computer lab, where the instructor utilizes some of the features of the smart board. In addition, the course has a website that carries course material including lecture notes, previous exams, and relevant links. Students can access such material; also students are referred to the web for some related activities.			

B Objectives

<p>1. What is the main purpose for this course? Provide students with knowledge regarding the standard theoretical and empirical models used in the investigation of firm level production decisions.</p>
<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"> - Providing updated software and infrastructure. - Post the course material online, and utilize the various internet resources that offer informative details to support the lecture course material, and reference materials. - Intensify the use of tutorial and assignments related to research papers provided by the university online library to enrich the scope of the course. - Updating the objectives of the course and the scientific content.

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
Principles in agricultural production economics, agricultural economics and research it, the major economic problems, agricultural economics, the definition of agricultural production economics, the nature of the productive resources, factors of agricultural production.	1	2
Higher derivatives, limits maximum and minimum of functions, optimization and minimization unrestricted, optimization and minimization restricted, homogeneous production functions.	1	3
Relations between resources and agricultural production, productivity and function principles of the preliminary selection, the concept of the function of productivity, production function assumptions, ways of expressing the production function, the nature of the function of productivity, the classics production function.	1	3
Derivatives economic production function, average physical product, marginal physical product, elasticity of production, the law of diminishing returns and the three stages of production	1	3
Productive value functions, the concept of production costs. Unit costs, average and marginal costs, Derivative engineering functions average and marginal costs.	1	3
Mid Exam	1	2

Determine the optimal size of the resource production to the production function of one variable resource, profits maximization , the balance in the short term, maximize profits and maximize output, the demand curve for a production variable, the opportunity cost and the allocation of scarce resources.	1	3
The Production function of tow inputs, Isoquant curves.	1	3
Substitution elasticity of resources, lines of Iso-cost, determining the resources at least cost.	1	3
Determining the resources that maximize profits, economic zone and Expansion Path and Ridg lines , economic efficiency.	1	3
Cobb - Douglas Production function , maximize profits using Cobb – Douglas production function, the main disadvantages of Cobb Douglas production function, cost function derivation of the Cobb Douglas production function.	1	3
Mid Exam 2	1	2
The Constant Elasticity of Substitution Production Function (CES) The Variable Elasticity of Substitution Production Function (VES) Quadratic Production Functions Transcendental Production Functions	1	2
The production of two or more goods, The Production Possibility Curve , derive curves The Production Possibility Curve, production possibilities curve and the relations between goods produced.	1	2
Marginal Rate of Product Substitution (MRPS) Iso-Revenue Line	1	2
Economies of scale, Production in the Long Run, Long-Run Cost Curves, Returns Scale Increasing Returns To Scale (IRS)Constant Returns To Scale (CRS),Decreasing Returns To Scale (DRS), The Law of Variable Proportions, Technical Progress and the Production Function, Capital – Deepening Technical Progress Labour– Deepening Technical Progress, Neutral Technical Progress	1	2
Total	16	41 hours

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	26 hours	N/A	N/A	15 hours	N/A	41 hours
Credit	N/A	N/A	N/A	N/A	N/A	3 Credits

3. Additional private study/learning hours expected for students per week.	2
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

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	List the basic principles of production economics, and the relationship between resources and output.	Lectures	Two major examinations
1.2	Recognize the different items of production costs in agricultural production, and the optimum use of resources.	- Lectures. - Tutorials.	
2.0	Cognitive Skills		
2.1	Judge the most efficient possible production path		
2.2	Calculate the most profitable amount of input use.	- Lectures. - Tutorials.	- Intra-term tests(2 – 3). - Weekly homework assignments.
3.0	Interpersonal Skills & Responsibility		

3.1	Analyze the supply decisions of the farm, and its response to a change in output price.		
3.2	Evaluate the combinations of inputs and output that will maximize the profits.	- Lectures. - Tutorials.	- Intra-term tests(2 – 3). - Weekly homework assignments.
4.0	Communication, Information Technology, Numerical		
4.1	Evaluate the costs of production and calculate the least-cost choice.		
4.2	Illustrate the impact of technical changes on the level of output, costs, and profits.	- Lectures. - Tutorials.	- Intra-term tests (2 – 3). - Weekly homework - Assignments.
5.0	Psychomotor		
5.1	N/A		
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	Homework	Week 1-13	20%
2	Exam 1	Week 5	20%
3	Exam 2	Week 10	20%
4	Final Exam	Week 16	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)

Office No.

Tel: 4678507

E-mail: knahar@ksu.edu.sa

Office hours: Tus: 9:30-12:30

E. Learning Resources

1. List Required Textbooks

- Alvitry, Amerm and Morad Mousa, Agricultural Production Economics, first Eddition, Alfateh University, 2000.

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

- Salm Alnjafy, Agricultural Production Economics, Almosel University, 1982
- Alothamy, Mahmood Sadeq, Agricultural Production Economics, 1972
- Varian, Hal R. *Microeconomic Analysis* Third Edition (New York: W.W. Norton & Company, 1992).
- Jorgenson, Dale W. *Econometrics Volume 1: Econometric Modeling of Producer Behavior* (Cambridge, MA: The MIT Press, 2000).

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

- Chambers, Robert G. *Applied Production Analysis: A Dual Approach* (New York: Cambridge University Press, 1988).
- Beattie, Bruce R. and C. Robert Taylor. *The Economics of Production* (New York: John Wiley & Sons, 1985).
- Fare, Rolf and Daniel Primont. *Multi-Output Production and Duality: Theory and Applications* (Boston: Kluwer Academic Publishers, 1995).
- Mas-Colell, Andreu, Micheal D. Whinston, and Jerry R. Green. *Microeconomic Theory* (New York: Oxford University Press, 1995).
- Shephard, Ronald W. *Theory of Cost and Production Functions* (Princeton, New Jersey: Princeton University Press, 1970).
- Theil, Henri. *The System-Wide Approach to Microeconomics* (Chicago: Chicago University Press, 1980).

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

N/A

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

N/A

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.) <ul style="list-style-type: none"> • Classrooms (20 – 30 seats). • Computer lab (20 – 30 devices).
2. Computing resources (AV, data show, Smart Board, software, etc.) <ul style="list-style-type: none"> • Data Show • Smart Board • Software
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

<p>1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <ul style="list-style-type: none"> - Student's survey at the end of the semester as a regular evaluation of the theoretical and practical parts, which is a confidential course evaluation questionnaire. - Performance appraisal form filled up by each student to show level of fulfillment.
<p>2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor</p> <ul style="list-style-type: none"> - A regular statistical review and analysis of the students' achievement in the department. - Feedback from Student's Survey response. - Ad-hoc investigation regarding the student's point of view about the shortcomings and strengths of the teaching methods, and level of satisfaction regarding the general performance.
<p>3 Processes for Improvement of Teaching</p> <ul style="list-style-type: none"> - Participation in training, workshops, and conferences related to university teaching strategies. - Regular update of references and other teaching resources. - Follow-up of progress and work on improvement by a specialized committee.

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)

Currently there is no such process in place.

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

- Student's feedback on the quality of the course.
- Consulting other faculty members or collaborators in overseas universities for their views on quality of improvement
- Check other universities web sites to compare our lectures with them, and compare the syllabus with the syllabus of standard universities.
- Form a specialized committee from the department to review the progress of teaching and update the resources

Faculty or Teaching Staff: Proff. Khalid Alrwis

Signature: _____ **Date Report Completed:** 25/2/2014

Received by: _____ **Dean/Department Head**

Signature: _____ **Date:** _____