ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

Course Specifications
(CS)

Principles of Plant Epidemiology

PLPT 420

Dr. Ahmad Sa'ad Al-Hazmi

Course Specifications

Institution: **King Saud University**	Date of Report: **13/5/2014**
College/Department: **College of Food and Agricultural Sciences / Plant Protection Department**	

A. Course Identification and General Information

1. Course title and code: **Principles of Plant Epidemiology (PLPT 420)**
2. Credit hours: **2(1 lecture + 1 Practical)**
3. Program(s) in which the course is offered.
(If general elective available in many programs indicate this rather than list programs)
This is an elective course offered to students majoring in Plant Protection.
4. Name of faculty member responsible for the course
Dr. Ahmad Sa'ad Al-Hazmi
5. Level/year at which this course is offered: **6th level / 3rd year**
6. Pre-requisites for this course (if any)
PLPT 221 [Principles of Plant Pathology]
7. Co-requisites for this course (if any)
None
8. Location if not on main campus
None
9. Mode of Instruction (mark all that apply)

a. Traditional classroom	√	What percentage?	**50**
b. Blended (traditional and online)		What percentage?	
c. e-learning		What percentage?	
d. Correspondence		What percentage?	
f. Other - **Experimental learning**	√	What percentage?	**50**

Comments:

B Objectives

1. What is the main purpose for this course? **Students are expected to learn:** - **Principles and basics of plant epidemiology.** - **Brief study of quantitative epidemiology.** - **Environmental effects on epidemics.** - **Forecasting and phytogeography.**
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) - **Make use of internet to update information and reviews.** - **Periodical reviews and development of materials.** - **Use of important practical and applied components of the course.**

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 and history of plant epidemiology.	**1**	**1**
Definitions and concepts.	**2**	**2**
Disease progress curve [DPC].	**2**	**2**
Types of plant epidemics.	**1**	**1**
Quantitative determination of epidemics.	**2**	**2**
Effects of climate and weather on epidemics.	**2**	**2**
Estimation of crop losses.	**2**	**2**
Forecasting.	**1**	**1**
Distribution patterns and geography of plant diseases.	**2**	**2**

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	**15 hrs**			**30 hrs**		
Credit						

3. Additional private study/learning hours expected for students per week. **Reports of the practical learning.**	**2hrs /wk**

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	**Introduction to plant epidemiology, its roles and applications. Disease progress curve. Study of the different factors that affect the development of epidemics. Disease forecasting. Phytogeopathology.**	• **In class lectures, linked to previous knowledge.** • **Discussions, reviews and comments.** • **Homeworks, and special readings.** • **Lab. works, problem solving, and small experiments.**	• **Periodical tests and quizzes.** • **Evaluations of lab. works and assignments.**
2.0	**Cognitive Skills**		
2.1	• **Knowledge of plant epidemiology and its applications.** • **Quantitative plant epidemiology.** • **Factors affecting epidemics.**	• **Class discussions, reviews and comments.** • **Homeworks and problems solving.** • **Individual lab. works and reports.**	• **Evaluation of lab. reports.** • **Evaluation of students' presentations in class.**
3.0	**Interpersonal Skills & Responsibility**		
3.1	• **Lab. works as individuals or as groups.** • **In class discussions of lab. works and small experiments.** • **Homework by individuals or by groups.**	• **Lab. small experiments conducted by individuals or groups.** • **Writing and discussion of results of these experiments.**	• **Evaluation of experiments conducted by individuals or groups.** • **Evaluation of student reports and discussions.**
4.0	**Communication, Information Technology, Numerical**		
4.1	• **Data recording of lab. experiments.** • **Use of computers in reporting and presentation.** • **Statistical analysis of data collected.**	• **Problem solving.** • **Use of computers in handling and reporting results.** • **Writing reports.**	• **Evaluation of students' reports.** • **Evaluation of students' presentations in class.**
5.0	**Psychomotor**		
5.1	• **Abilities to use tools and equipments very efficiently.**	• **Training each student to handle and use tools and equipments very safely and efficiently.**	• **Evaluation of how each student is using and handling tools and equipments.**

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 lecture exam.**	**7**	**15 %**
2	**Second lecture exam.**	**14**	**15 %**
3	**Practical reports and quizzes.**	**Periodically**	**30 %**
4	**Final exam.**	**16**	**40 %**

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) - **Instructor office hrs. : 8 hrs. / weeks** - **Lab., and lab. technicians are available all day.** - **E mail: asalhazmi@ksu.edu.sa** - **Office number: 467-8433** - **Mobile: 0503233756**

E. Learning Resources

1. List Required Textbooks **Lecture handouts. Textbooks in Arabic are not available.**
2. List Essential References Materials (Journals, Reports, etc.) **Madden, L. V.; G. Hughes and F.V. D. Bosch (2007). (3 printing 2011). The Study Disease of Epidemics. Amer. Phyto. Society.** **Cooke, B. M.; D. Jones and B. Kaye (2005). The epidemiology of Plant Diseases. Springer Press.** **Zodoks, J. C. and R. D. Schein (1979). Epidemiology and plant disease management, Springer Press.**
3. List Recommended Textbooks and Reference Material (Journals, Reports, etc) **As above.**
4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.) **Related web sites as needed.**
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software. **Documentary films, CD's, related sites.**

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.) • **Lecture room, caps. 20 – 30 students.** • **Teaching lab., caps. 20 – 30 student.** • **Small greenhouse.**
2. Computing resources (AV, data show, Smart Board, software, etc.) • **The department computer facility is available to all students of this course.**
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) • **All needed tools & equipments are available in our teaching or research labs.**

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching • **Evaluations of teaching by students.** • **Discussion with students about the positive and negative aspects of teaching.**
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor • **Discussion with colleagues within our department.** • **Discussion during the departmental periodic meetings.**
3 Processes for Improvement of Teaching • **Periodic reviews of delivered materials.** • **Adapting new and better books.** • **Periodic departmental review of courses contents.**
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) • **Periodic exchange of evaluation of student works and assignments.**

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • **Periodic reviews of the course by the department academic planning committee.** • **Periodic reviews and improvements of course materials and teachings.**

Faculty or Teaching Staff: Prof. Ahmad S. Al-Hazmi

Signature: _____ **Date Report Completed: 13/5/2014**

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

Signature: _____ **Date: _____**