PROGRAM: BACHELOR PENDIDIKAN JARAK JAUH

COURSE: PERTANIAN DAN MANUSIA (AGRICULTURE & MAN)

CODE: PRT 2008

SESSION: Semester II, 2012-13

CREDIT: 2 + 0

LECTURER: Assoc. Professor Dr. Tan Yee How

Address:

Postal
Department of Plant Protection
Faculty of Agriculture
Universiti Putra Malaysia
43400 Serdang, Selangor Darul Ehsan

email
alvinyht@agri.upm.edu.my

Telephone:
Office 03-89474851
Mobile 016-3951526

LEARNING OUTCOME:

At the end of the course, a student will be able to:

1. explain the role of agriculture in the development of civilization and well-being of mankind (C2)

2. elucidate the importance of the agricultural sector in ensuring food security and basic industrial resources (P2, TS)

3. discuss and evaluate the importance of agricultural resources and their management for the development of sustainable agriculture (A3, EM)

SYNOPSIS:

This course encompasses the evolution of agriculture from the beginning to the present as a planned activity for food security and wealth creation driven by sustainable economic and technological advancement. Modern agriculture is presented as a science, an art and a business, encompassing its role and impact on resource utilization and human development.

No. Lecture Topic Hours

1. Introduction & Scope of Modern Agriculture 2

- Definition of agriculture
- Importance of agriculture
2. Transformation of Agriculture - Agricultural Evolution

- Pre-historic era through the Middle Ages, and domestication of plants and animals
- Utilization of human labour, animals, machines, information and biotechnology
- Values, customs and taboos in traditional & modern agriculture
- Culture of nomadic & sedentary agriculture
- Influence of religion on agriculture
- Influence of lifestyle on agriculture


- Causal factors: population increase, resource constraints, product choices, environmental-friendly practices, technological development
- Characteristics: high-yielding and disease-resistant varieties, chemicals and bioagents, precision agriculture, mechanizations and automation, biotechnology, agricultural enactments and schemes

4. Agro-Ecological System - Basic Agricultural Resources and the Environment

- Climate, water, soil and human resources
- Environment
  - Global agroecological zones: tundra, grasslands, deserts, tropics
  - Impact of climatic changes: global warming, desertification
  - Impact of pollution: acid rain, heavy metals, pesticides, nitrates

5. Genetic Resources in Agriculture

- Origin and distribution of crop plants and livestock
- Germplasm and biological diversity
- Genetic variation and conservation of genetic resources

MID-TERM EXAMINATION

6A. Sustainable Agriculture

- Economic development
- Environmental conservation
- Socio-political benefits
- planning and decision-making

6B. Agricultural Practices in Malaysia

- Historical development
- Characteristics
- Crop production
- Livestock production and Aquaculture
- Marketing
7. **Economics of Agricultural Development** (Agriculture and the Malaysian Economy)  
   - Contribution of agriculture to Malaysian economy  
   - International trade in agriculture

8. **Innovation & Challenges in Agriculture.**  
   - Research and innovation technology  
   - Future challenges in agriculture

9. **Approaches to Agricultural Development in Malaysia.**  
   - National agricultural policy  
   - Education, research and development institutions, and extension services  
     - Legislations, policies and standards

**FINAL EXAMINATION**

**TOTAL HOURS**  
28

**REFERENCES**


**COURSE ASSESSMENT**

1. **MID-SEMESTER EXAMINATION** (5-7 April 2013, based on Chapters 1-5, 30 Questions, multiple choice.)  
   30%

2. **FINAL EXAMINATION** (7-9 June 2013, based on all chapters, with major emphasis on Chapters 6-9, 40 Questions, multiple choice)  
   40%

3. **GROUP ASSIGNMENT**  
   30%

**TOTAL**  
100%
GROUP ASSIGNMENT (TUGASAN)

1. A critical review is conducted on a topic pertaining to agriculture selected from a list to reflect a grasp of the salient features and understanding of the principles involved in the subject.

   Write with particular reference to MALAYSIA

   You could source information for your assignment from the library, Internet or on-site visits to relevant places.

2. For this task, students will be assigned into groups based on their localities by the Course Lecturer (Assoc. Prof. Dr. Tan).

3. You will be informed on-line or through your center on the particular group you are assigned by around the 4th week once the registration of students has been finalized.

4. You are NOT PERMITTED to switch to another group under any circumstance. If you do so, your assignment report is invalidated. You will receive 0 mark!

5. Each group can select any topic from the list.

6. The assignment is to be written in English.

7. Avoid ‘cut and paste’ and full references must be made if this is done.

8. At the end of the review exercise, each group will submit a written report consisting of not less than 15 typewritten pages, font 12, 1½ spacing, inclusive of illustrations. Make sure you include a ‘Contents’ page.

9. All members of the group must have their names on the report which is bar coded. Any student whose name does not appear on the report will not receive any mark.

10. Marks are group-based with all members of a group receiving the same mark. This emphasizes the importance of group discussion and teamwork.

   You should try to make contact with all your group members at an early stage.

11. The report has to be submitted to UPM Education and Training Sdn Bhd, Universiti Putra Malaysia, Serdang, Selangor, Malaysia on time otherwise it will not be marked.

ASSIGNMENT TOPICS

1. Advocating good agricultural practices.
2. Impact of AFTA on Malaysian Agriculture.
3. Linking farmers to market.
4. Food safety.
5. Halal hub.
6. Alternative (non-conventional) agricultural production
7. ICT in Malaysian agriculture.
8. Integrated farming in Malaysia.
9. Agricultural biotechnology
10. Genetically modified organisms (GMOs) in agriculture
11. Technology transfer in agriculture.
12. Environmental issues in agriculture.
13. Agriculture as the third engine of growth in Malaysia.
14. Mushroom cultivation in Malaysia.
15. Biodiversity.
17. Recreational fishing.
18. Labour problems in agriculture.
19. Mechanization and automation in agriculture.
20. Precision agriculture.
21. Agriculture for non-food purposes.
22. Aquafarming.
23. Micro-organisms in the Malaysian agricultural industry
25. Hydroponics
27. Benefiting from agricultural wastes.
28. Can agriculture survive against industrialization on the road towards developed nation status?
29. Agriculture as a desired profession in the 21st century.
30. Agriculture in developing and developed nations