PROGRAM: BACHELOR PENDIDIKAN JARAK JAUH
COURSE: PERTANIAN DAN MANUSIA (AGRICULTURE & MAN)
CODE: PRT 2008
SESSION: Semester II, 2011-12
CREDIT: 2 + 0
LECTURER: Assoc. Professor Dr. Tan Yee How

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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.

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<thead>
<tr>
<th>No.</th>
<th>Lecture Topic</th>
<th>Hours</th>
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<tbody>
<tr>
<td>1.</td>
<td>Introduction &amp; Scope of Modern Agriculture</td>
<td>3</td>
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<td></td>
<td>- Definition of agriculture</td>
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<td>- Importance of agriculture</td>
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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-TERM EXAMINATION** (23-25 March 2012, based on 7 weeks or 14 hrs-lectures, Chap. 1-5 in module ‘Agriculture & Man’ by Yusof Ibrahim & Tan Yee How + additional Notes: 30 Questions, Time: 60 minutes) 30%

2. **FINAL EXAMINATION** (11-13 May 2012, based on 14 weeks or 28 hrs-lectures, Chap.1-9 in module + additional Notes, 40 Questions, Time: 60 minutes) 40%

3. **GROUP ASSIGNMENT** 30%

**TOTAL** 100%
EXAMINATION FORMAT (MID-TERM and FINAL)

Questions will be based on the contents in the PJJ module Agriculture & Man (Yusof Ibrahim & Tan Yee How, 2007 + additional Notes) and the power-point presentation, available on-line.

Questions would be objective (multiple choice) in nature. Example:

Sustainable agriculture is a system that is:

A. linear (in a line, like a factory)  
B. expensive  
C. damaging to the environment  
D. a common commercial practice  
E. none of the above

Answer: E

GROUP ASSIGNMENT (TUGASAN)

1. A critical review is conducted on a topic pertaining to agriculture selected from the list below. Salient features should be described together with an understanding of the principles involved, QUOTING LOCAL EXAMPLES. You could get information 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 the particular group you are assigned by around the 4th week once the final registered list of students is known.

4. You are NOT ALLOWED to switch to another group. If you do so, you will not receive any mark for your assignment!

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 Pusat Pendidikan Luar, 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