



UNIVERSITI TEKNOLOGI MARA

BDY531: ENTOMOLOGY

Course Name (English)	ENTOMOLOGY APPROVED
Course Code	BDY531
MQF Credit	3
Course Description	A basic understanding of entomology is useful to student in a variety of biological fields that learn all about insects. Insects are the most diverse organisms on the planet and they are essential for the function of most terrestrial ecosystems. Consequently, insects have played decisive roles in the evolution of many ecology systems, such as flowering plants and forest stands. Besides that the important scientific concepts through a basis of entomology, including are emphasis on topics such as ecology and behaviour. This course emphasizes the importance of critical thinking. Eventually, students are required to use the scientific method to design, execute and interpret an entomological research and experiment and lead to the appreciation of importance of the natural world.
Transferable Skills	Skills and how they are developed and assessed, Project and practical experience and Internship On completion of the course the student will be able to: <ol style="list-style-type: none">1. Apply the principle and knowledge on the pest classification, biology, natural history and other characteristics.2. Able to develop and establish the suitable sampling plots in the field work.3. Communicate effectively with others to solve some given situations and problems.4. Able to manage and analyzed the raw data and parameters by using a statistical software.5. Apply the proper skill to establish the researches that relate to the entomology fields.
Teaching Methodologies	Lectures, Field Trip, Case Study, Discussion
CLO	CLO1 Describe a general knowledge of insect including classification, biology, natural history, survival, reproduction system and diversity of insects. CLO2 Apply skills for collecting, mounting and preserving insects for scientific study. CLO3 Explain the ecology of forest pests; including host-plant interactions, population dynamics and natural enemies of forest insects. CLO4 Develop the insect sampling in forest ecosystems and general methods for managing forest pest insects which lead to the understanding of the need for good sustainable forest management practices.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to General Entomology 1.1) N/A	
2. Classification and Value of Insect 2.1) N/A	
3. Insect Damage and Sign Categories 3.1) N/A	
4. Insect Feeding Groups 4.1) N/A	
5. Bark beetles and wood borers 5.1) N/A	

6. Gall makers and defoliating insects 6.1) N/A
7. Fluid-feeding insects 7.1) N/A
8. Terminal and root insects 8.1) N/A
9. Seed and cone pests 9.1) N/A
10. Insect Ecology 10.1) N/A
11. Population Dynamics of Forest Insects 11.1) N/A
12. Application of information on population dynamics of forest insects 12.1) N/A
13. Management of Entomology 13.1) N/A
14. Principles and Techniques of Integrated Pest Management 14.1) N/A

Assessment Breakdown	%
Continuous Assessment	70.00%
Final Assessment	30.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment	20%	CLO4
	Presentation	Presentation	20%	CLO2
	Test	Test	30%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> William M. Ciesla 2011, <i>Forest Entomology: A Global Perspective</i>, John Wiley & Sons, Inc USA
	Reference Book Resources	<ul style="list-style-type: none"> Berryman, A. 1986, <i>Forest Insects: Principles and Practice of Population Management</i>, Plenum Press New York Borror, D.J. and White, R.E. 1998, <i>A Field Guide to Insects: America North of Mexico</i>, 2nd Edition Ed., Houghton Mifflin Co Boston Coulson, R.N. and Witter, J.A 1984, <i>Forest Entomology: Ecology and Management.</i>, John Wiley & Sons, Inc New York Cullen, P.J. and Cranston, P.S. 1994, <i>The Insects: An Outline of Entomology.</i>, Chapman and Hall London Leather, S. 2005, <i>Insect Sampling in Forest Ecosystems</i>, Blackwell Science Ltd Oxford, UK. Solomon, J.D. 1995, <i>Guide to Insect Borers of North American Broadleaf Trees and Shrubs</i>, Agric. Handbook Wainshouse 2005, <i>Ecological Methods in Forest Pest Management</i>, Oxford University Press Inc. New York
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	