

Course Code	BYU 5308					
Level	05					
Course Title	Postharvest Technology of Fresh Produce					
Credit value	03					
Core/Optional	Optional					
Prerequisites	BYU4300 pass /valid OCAM, BOU 2200 EL/pass					
Hourly breakdown	Theory		Practical	Independent Learning	Assessment	Total
	(19 Sessions) 2 x 19 38hrs	(3 DSs) 3x3 09 hrs	(2 1/2 days Lab including a one day field visit) 6 x 2.5 15 hrs	(Sessions-3 x 19 sessions (57 hrs) Lab/field/other- 15x0.5(7.5 hrs) Online /Audio-visual materials and other learning resources[14hrs] Recommended reading[14hrs]) 92.5 hrs	(2 CATs x 1 hr.) + (1 Practical test x 1hr) 03 hrs	157.5 hrs
Course Aim/s.	<p>To provide knowledge on</p> <ol style="list-style-type: none"> pre and postharvest contribution of fresh produce to human nutrition, pre and postharvest behaviour of fresh produce with particular reference to their pre and postharvest physiology and biochemistry, role of ethylene in fruit and vegetable production, causes of postharvest losses of fresh produce and pre and postharvest disease control methods harvesting and field handling of fresh produce, packaging technology, cooling, transport and storage technology, packing house operations, processing of fruits and vegetables into various products, quality management of fruits and vegetables and marketing of fresh produce. 					
PLOs addressed by course	<p>PLO1: Knowledge: Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the degree.</p> <p>PLO2: Practical Knowledge and Application. Demonstrate the competency to use the knowledge and practical skills appropriately.</p> <p>PLO4: Individual Work, Team Work and Leadership: Demonstrate the competency in working independently and in groups in addressing issues in multi-disciplinary environments and completing the tasks on time through collaborative learning while exhibiting leadership.</p> <p>PLO7: Information and Communication Technology Literate: Demonstrate the competency of using Information and Communication Technology for numerical and statistical analysis, and in day to day applications.</p>					
Course Learning Outcomes (CLO)	<p>The students should be able to:</p> <p>CLO1: analyze the main objectives of applying post-harvest technology to fresh produce, and the importance of fruits and vegetables as food, (PLO1,PLO7)</p> <p>CLO2: discuss the physiological development of fresh produce and the physiology and biochemistry of senescence and abscission(PLO1, PLO2, PLO4, PLO7)</p> <p>CLO3: demonstrate the role of ethylene in fruit and vegetable production and evaluate the harmful effects of ethylene and explain how to control the ethylene levels in plant tissues and storage environment (PLO1, PLO7)</p> <p>CLO4: categorize the factors causing post-harvest losses of fresh produce ,and determine the post-harvest diseases of local fresh produce by observing the symptoms and describe how to control the post-harvest diseases(PLO1, PLO2, PLO4, PLO7)</p> <p>CLO5: explain how harvesting and field handling of fresh produce are done (PLO1, PLO2, PLO4, PLO7).</p> <p>CLO6: relate preharvest factors to post-harvest quality of crops(PLO1, PLO7)</p> <p>CLO7: discuss packaging, cooling, transport and storage of commodities and packing house operations (PLO1, PLO2, PLO4, PLO7)).</p> <p>CLO8: demonstrate some common methods of preservation and processing of fruits and vegetables (PLO1,PLO7)</p> <p>CLO9: apply the minimal processing technology in order to provide sufficient shelf life to food (PLO1,PLO7)</p> <p>CLO10: explain the quality management and marketing of fresh produce. (PLO1,PLO7)</p>					
Content (Main topics, sub topics)	<p>Postharvest biology of fresh produce – Introduction to postharvest technology, contribution of food of plant origin to human nutrition, pre and postharvest physiology and biochemistry of fresh produce, ethylene in postharvest technology, postharvest losses of fresh produce, control of postharvest diseases of fresh produce</p> <p>Postharvest handling, value addition and marketing of fresh produce- harvesting and field handling of fresh produce, preharvest management for postharvest quality, packaging and packing of fresh produce, cooling of fresh produce, transport of fresh produce, storage of fresh produce, packing house operations, specialized utilization of fresh produce, quality assurance and marketing of fresh produce.</p>					

Teaching Learning methods	<p>Self-Learning/Independent learning of Self-study</p> <ul style="list-style-type: none"> ▪ Instructional Material (IL) ▪ Online Activities (OL) ▪ Reference Work (RE) <p>Compulsory contact sessions</p> <ul style="list-style-type: none"> ▪ Practical Sessions (PR) ▪ Field Trip (FT) ▪ Assessments (AS) and Feedback – MCQs (MCQ); Structured Essay (SEQ); Essay Questions (ES) Reports (RE); Practical Tests (PT) <p>Non-compulsory contact sessions</p> <ul style="list-style-type: none"> ▪ Day schools (DS) 	
Assessment strategy	Overall Continuous Assessment Mark (OCAM): 40%	Final Assessment: 60%
	50% of the higher score from OBT or NBT (1h) + 20% of the other score from OBT or NBT (1h) + 30% Practical test (1h) Minimum 30 marks compulsory for PT	<i>Final Evaluation</i> Theory: 100% 2hrs
Recommended Readings:	<ul style="list-style-type: none"> • Kader, A.A. (1992) Post-harvest technology of horticultural crops. University of California. • Krishanthi Abeywickrama, (2009) Post-harvest concepts and research trends. Godage International Publishers, Colombo. • Mitra, S. (1998). Post-harvest physiology and storage of tropical fruits, CAB international, UK. 	