



UNIVERSITI TEKNOLOGI MARA

AGA648: HORTICULTURE IRRIGATION TECHNOLOGY

<b>Course Name (English)</b>	HORTICULTURE IRRIGATION TECHNOLOGY <b>APPROVED</b>
<b>Course Code</b>	AGA648
<b>MQF Credit</b>	3
<b>Course Description</b>	The course will introduce the students to the principles of irrigation and their importance in crop production. Key components of irrigation system such as water source, pump and distribution system are highlighted. The course exposes the student about irrigation technologies used in various cropping systems. It covers the concept of each irrigation methods including the operation systems and applications.
<b>Transferable Skills</b>	1. Reflective Learner - Demonstrate ability to identify and articulate self skills, knowledge and understanding confidently and in a variety of contexts. 2. Effective Communicator - Demonstrate ability to communicate clearly and confidently, and listen critically. 3. Systematically Inquisitive - Demonstrate ability to investigate problems and provide effective solutions.
<b>Teaching Methodologies</b>	Lectures, Blended Learning, Lab Work, Field Trip
<b>CLO</b>	CLO1 Identify the irrigation principles and the technology used in various cropping systems. CLO2 Determine the amount of irrigation water for different crops CLO3 Display the operation of irrigation systems and their maintenance CLO4 Justify the various irrigation system layout
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Introduction to Irrigation</b> 1.1) N/A	
<b>2. Irrigation Principles</b> 2.1) N/A	
<b>3. Surface Irrigation Technology</b> 3.1) N/A	
<b>4. Sub-Irrigation Technology</b> 4.1) N/A	
<b>5. Sprinkler Irrigation Technology</b> 5.1) N/A	
<b>6. Micro-irrigation / Drip Irrigation Technology</b> 6.1) N/A	
<b>7. Fertigation Technology</b> 7.1) N/A	

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Group Project	Practical skills	5%	CLO3
	Group Project	n/a	15%	CLO4
	Online Quiz	n/a	10%	CLO2
	Test	Online Test	20%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> <li>• Ali, M.H. 2011, <i>Practices of Irrigation &amp; On-farm Water Management</i>, Springer New York 10013, USA [ISBN: 1-4419-7636-9]</li> <li>• Keesen Larry E 2013, <i>The Complete Irrigation Workbook: Design, Installation, Maintenance and Water Management.</i>, NSW Department of Primary Industries Australia [ISBN: 978174256787]</li> </ul>
	Reference Book Resources	<ul style="list-style-type: none"> <li>• R. K. Sharma, T. K. Sharma 1991, <i>Textbook of Irrigation Engineering</i>, Oxford &amp; IBH Publishing Co [ISBN: 9788120405080]</li> <li>• Lamm, F.R., J.E. Ayars and F.S.Nakayama. 2007, <i>Micro-irrigation for Crop Production – Design, Operation and Management, Development in Agricultural Engineering</i>, Elsevier Publications</li> <li>• Hoffman, G.J., R.G. Evans, M.E. Jensen, D.L. Martin and R.L. Elliott. 2007, <i>Design and Operation of Farm Irrigation Systems</i>, 2 Ed., ASAE [ISBN: 18927696]</li> </ul>
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	