



UNIVERSITI TEKNOLOGI MARA

MIC672: PROBIOTICS

Course Name (English)	PROBIOTICS APPROVED		
Course Code	MIC672		
MQF Credit	3		
Course Description	The aim of the course is to describe the types of probiotic bacteria associated to man and their importance. This course will also discuss how administration of specific probiotic could prevent and counteract disease in human and their mechanisms of action. The applications of probiotic in food and supplements as well as their safety will also be discussed. The concept and importance of prebiotic related to probiotics will be also be explained. The course will be conducted through the combination of lectures, class discussion, presentation, case studies and etc.		
Transferable Skills	Preserving probiotic by encapsulation, freeze drying, spray drying techniques Handling stirred tank bioreactor for mass microbial cultivation Using software (eg RSM) for experimental design and data analysis Skills developed during practical classes and assessed by practical observations		
Teaching Methodologies	Lectures, Practical Classes, Discussion, Presentation		
CLO	CLO1 explain the concept of probiotics and prebiotics CLO2 Describe the probiotics identification and classification CLO3 Explain and discuss the relationship between microbiota, intake of probiotics and their effects on human physiology as well as impact on health and diseases CLO4 Explain and discuss the interaction between probiotic bacteria and food CLO5 Evaluate, summarize and mediate by explanation either verbally or in writing on when, how and why probiotic bacteria, prebiotic and the intestinal bacterial flora influence the human health status and how to combine probiotics and foods.		
Pre-Requisite Courses	No course recommendations		
Reading List	<table><tr><td>Recommended Text</td><td><ul style="list-style-type: none">• Dimitris Charalampopoulos Robert A. Rastall 2020, 3. <i>Prebiotics and Probiotics Science and Technology</i>, Springer [ISBN: 978-0-387-790]• Malago J.J., Konninkx, J.F., Marinsek, J.G., Logan, R 2011, <i>Probiotic Bacteria an Enteric Infection</i>, Springer [ISBN: ISBN: 9789400]• Liong, Min-Tz 2011, <i>Probiotics</i>, Springer-Verlag Berlin Heidelberg [ISBN: ISBN 978-3-64]• Ronald Watson, Victor R. Preedy 2010, <i>Bioactive Foods in Promoting Health- Probiotic and Prebiotics</i>. Academic Press [ISBN: ISBN: 9780123]</td></tr></table>	Recommended Text	<ul style="list-style-type: none">• Dimitris Charalampopoulos Robert A. Rastall 2020, 3. <i>Prebiotics and Probiotics Science and Technology</i>, Springer [ISBN: 978-0-387-790]• Malago J.J., Konninkx, J.F., Marinsek, J.G., Logan, R 2011, <i>Probiotic Bacteria an Enteric Infection</i>, Springer [ISBN: ISBN: 9789400]• Liong, Min-Tz 2011, <i>Probiotics</i>, Springer-Verlag Berlin Heidelberg [ISBN: ISBN 978-3-64]• Ronald Watson, Victor R. Preedy 2010, <i>Bioactive Foods in Promoting Health- Probiotic and Prebiotics</i>. Academic Press [ISBN: ISBN: 9780123]
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Article/Paper List	This Course does not have any article/paper resources		
Other References	This Course does not have any other resources		