



UNIVERSITI TEKNOLOGI MARA

BCT604: INNOVATION PROJECT I

<b>Course Name (English)</b>	INNOVATION PROJECT I <b>APPROVED</b>
<b>Course Code</b>	BCT604
<b>MQF Credit</b>	4
<b>Course Description</b>	This course introduces techniques of innovation processes in construction industry. It will introduce the concept of innovation processes in relation with construction technology based on current literature review. It will also emphasize on the innovative criteria of various types of project. This project will be focusing on the construction technology of IBS building, robotic application in construction and building materials.
<b>Transferable Skills</b>	1.Ability to review various construction innovation approaches available in the construction industry. 2.Ability to demonstrate information management in the selection of construction innovation approach for the most suitable design framework in construction 3.Ability to recommend improvised design framework for the innovation project
<b>Teaching Methodologies</b>	Lectures, Discussion, Supervision
<b>CLO</b>	CLO1 Review various construction innovation approaches available in the construction industry. CLO2 Demonstrate information management in the selection of construction innovation approach for the most suitable design framework in construction CLO3 Recommend improvised design framework for the innovation project
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Introduction To Innovation</b> 1.1) Definition of Innovation 1.2) Types of innovation eg. enhanced materials and techniques for IBS building, robotic, etc. 1.3) Advantage and disadvantages of Innovation 1.4) Government Circular on Innovation	
<b>2. Building Innovation Technology</b> 2.1) This innovation relates to building construction method or building system and materials. 2.2) Determination of the unnecessary method or process in construction will be highlighted. 2.3) Recommendation for better sequence of construction process or building system as well as materials to avoid future problems or to improve efficiency in construction works.	
<b>3. Robotic in Construction Innovation</b> 3.1) This topic is an introduction to construction robotic technologies, develop a possible taxonomy, reviews the evolution of a construction robot, and discuss future prospects for innovation.	

Assessment Breakdown		%	
Continuous Assessment		100.00%	

  

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Test	Written test on various innovation approaches adopted in construction industry	10%	CLO1
	Written Report	Individual written report on various construction innovation approaches available in the construction industry	10%	CLO1
	Written Report	Individual written report on selected construction innovation approach to establish the design framework	30%	CLO2
	Written Report	Individual written report on the improvised design framework for the innovation project	50%	CLO3

  

Reading List	Recommended Text
	<ul style="list-style-type: none"> <li>• Ajla Aksamija 2017, <i>Integrating Innovation in Architecture</i>, John Wiley &amp; Sons [ISBN: 9781119164821]</li> <li>• Andrew Watts 2016, <i>Modern Construction Case Studies</i>, Birkhauser [ISBN: 9783035610987]</li> <li>• Bruno Siciliano, Oussama Khatib 2016, <i>Springer Handbook of Robotics</i>, 44, Springer [ISBN: 9783319325507]</li> <li>• Finn Orstavik, A. R. J. Dainty, Carl Abbott 2015, <i>Construction Innovation</i>, John Wiley &amp; Sons [ISBN: 9781118655535]</li> <li>• Georg Weiers 2014, <i>Innovation Through Cooperation : the Emergence of an Idea Economy</i> [ISBN: 3319000942]</li> <li>• Jack Goulding, Farzad Pour Rahimian 2019, <i>Offsite Production and Manufacturing for Innovative Construction</i>, Routledge [ISBN: 9781138550711]</li> </ul>
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources