



## UNIVERSITI TEKNOLOGI MARA

### DSC762: SEMINAR AND INDUSTRY ENGAGEMENT

<b>Course Name (English)</b>	SEMINAR AND INDUSTRY ENGAGEMENT <b>APPROVED</b>
<b>Course Code</b>	DSC762
<b>MQF Credit</b>	3
<b>Course Description</b>	The objective of this course is to help a student to get started in the Research Project in the following semester. The course provides for individual study in areas of data science not covered in the regular curriculum under the supervision of a data science lecturer and an industry supervisor. The supervisors guide the student in the research process. The students also have to engage with the industry by attending seminars whereby domain experts are invited to share with the students practical case studies. The student and the supervisors should have an agreement on the work to be done by the student in advance; and then, develop the research proposal. Regular meetings with the supervisor(s) are required. The student need to review literature in the area of the planned Research Project, propose comparison, improving or applying selected algorithms or methods as part of developing solutions to the Research Project's problem. The work done is to be presented in a form of a research proposal and also communicated professionally in an oral presentation.
<b>Transferable Skills</b>	Conducts seminars, Industry real problems & solutions
<b>Teaching Methodologies</b>	Seminar/Colloquium, Supervision
<b>CLO</b>	CLO1 Identify the research or industry problem CLO2 Propose data science methods to solve the research or industry problem CLO3 Prepare a research proposal CLO4 Defend the research proposal CLO5 Advocate Big Data Analytics after attending industry seminar
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Issues in Bioinformatics and Bio-Statistics: Survival analysis; gene expression; stochastic process.</b> 1.1) N/A	
<b>2. Issues in Business Intelligence</b> 2.1) N/A	
<b>3. Issues in Medical Statistics and Medical Informatics</b> 3.1) N/A	
<b>4. Issues on Optimization of Business Process</b> 4.1) N/A	
<b>5. Industry Seminar (Issues related to Data Science).</b> 5.1) N/A	

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Attendance	Seminar Attendance	20%	CLO1
	Journal/Article Critique	Review Paper	10%	CLO2
	Presentation	Present findings from industry engagement	5%	CLO5
	Presentation	Present Research Proposal	15%	CLO4
	Written Report	Research Proposal	50%	CLO3

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> <li>• Buffalo, V. 2015, <i>Bioinformatics Data Skills: Reproducible and Robust Research with Open Source Tools</i>, O'Reilly Media, Inc.</li> <li>• Strickland, J.S. 2014, <i>Predictive Analytics Using R</i>, Lulu, Inc.</li> <li>• Gerstman, B. B. 2014, <i>Basic biostatistics: Statistics for Public Health Practice</i>, Jones &amp; Bartlett Publishers</li> <li>• Webb, A. and Copsey, K. 2011, <i>Statistical Pattern Recognition</i>, John Wiley and Sons</li> <li>• Carlo, V. 2009, <i>Business intelligence: data mining and optimization for decision making</i>, John Wiley and Sons.</li> <li>• Howson, C. 2014, <i>Successful Business Intelligence</i>, Second Edition Ed., McGraw-Hill</li> </ul>

Article/Paper List	Reference Article/Paper Resources
	<ul style="list-style-type: none"> <li>• Yanchang, Z., Yonghua, C. 2013, Data Mining Applications with R, <i>Elsevier 978-0-12-411511-8</i></li> <li>• Chen, H., Fuller, S. S., Friedman, C., &amp; Hersh, W. 2005, Knowledge management, data mining, and text mining in medical informatics, <i>Medical Informatics, Springer, 3</i></li> </ul>

Other References
This Course does not have any other resources