H8BI: Business Intelligence

Module Code:	H8BI
Long Title	Business Intelligence APPROVED
Title	Business Intelligence
Module Level:	LEVEL 8
EQF Level:	6
EHEA Level:	First Cycle
Credits:	5
Module Coordinator:	Sophie Flanagan
Module Author:	ORLA LAHART
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	Msc degree in Computer Science. Experience Lecturing , work experience or projects in the specific domain

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	**Learning Outcome Description**
LO1	Develop and build a solid understanding of the value and purpose of an implementation of Business Intelligence technologies and strategies within industry and other domains
LO2	Recognize and evaluate the theoretical and practical requirements for the implementation of strategic decision supporting Business Intelligence technologies
LO3	Comprehend and contrast the technological foundational architectures supporting BI systems and workflows
LO4	Build and evaluate a BI supportive platform through data collection and preparation with supporting complex visualization tools , reports and dashboards. with the ability to become proficient in storytelling of data, addressing audiences in an industry context and build upon key soft skills of communication in a BI role.
LO5	Discover, discuss and critique recent and cutting edge BI and visualization technologies for both current and future implementations

Dependencies
Module Recommendations
No recommendations listed
Co-requisite Modules
No Co-requisite modules listed

Entry requirements	

H8BI: Business Intelligence

Module Content & Assessment

Indicative Content

Concept of BI
○ Historical Context ○ Business Intelligence through Analytics ○ The Value of Correlation ○ Non-Trivial BI

Informed Business Decision Making with BI
○ Enterprise Strategic Planning ○ Gaining Competitive Edge ○ Securing Longevity through BI ○ Decision Patterns

Benefits of BI
○ Real World Scenarios ○ Positive Case Studies of BI ○ Negative Case Studies of BI ○ Best Practices and Standards

Technologies of BI
○ Data warehousing and Data Marts ○ Business Intelligence ○ Data Mining ○ Online Analytical Process ○ Dashboards / Visualizations

BI Application Framework
○ PowerBI ○ Tableau & Tableau Prep ○ Dynamics ○ ClickSense

BI and the Cloud
○ Altrex ○ Apache Druid ○ Snowflake ○ Crisp DM

Connecting to Data
○ API Implementations ○ Middle-ware Supporting BI ○ Dynamic Sources ○ Text and Sentiment Analysis ○ Real Time BI

Data Preparation
○ Effectively Cleaning Data ○ T in ETL ○ Dealing with Ambiguity ○ Process Automation ○ Tools for Cleaning

Future Implementations and Technologies
○ VR Virtual Reality ○ AR Augmented Reality ○ Machine Learning AI ○ Context Aware Applications ○ Online Analytical Process ○ RPA Robotic Process Automation

Effective BI
○ Dashboards ○ Reports / Stories ○ Design Thinking ○ Data Presentations ○ Soft-skills & BI

Assessment Breakdown	%
Coursework	100.00%

Assessments

Full Time

Coursework

Assessment Type:	CA 1	% of total:	20
Assessment Date:	n/a	Outcome addressed:	1,2,3
Non-Marked:	No		

Assessment Description:
Theory Based Assessment : Addressing the fundamental topics up to and including topic four, will be a timed assessment encompassing 20-30 questions

Assessment Type:	CA 2	% of total:	80
Assessment Date:	n/a	Outcome addressed:	3,4,5
Non-Marked:	No		

Assessment Description:
Group Project Based: Encompassing the development lifecycle an industry based BI solution, including but not limited to ETL, Reporting, visualization composition and CRM implementation. Students will also be assessed on storytelling of Data Visualizations and overall effective presentation skills.

No End of Module Assessment

No Workplace Assessment

Reassessment Requirement

Coursework Only
This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

Reassessment Description
The learner will be given the opportunity to repeat any of the above assessments which have been failed, this will be a repeat assessment through coursework alone, no written repeat exam will be provided. An opportunity to repeat will be at the end of the semester.

H8BI: Business Intelligence

Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	*Workload Description*	*Hours*	*Frequency*	*Average Weekly Learner Workload*
Lecture	Online / Classroom Activities	24	Per Semester	2.00
Tutorial	Practical & Tutorial Activities	12	Per Semester	1.00
Independent Learning	Independent Learning Activities	89	Per Semester	7.42
			Total Weekly Contact Hours	3.00

Module Resources

Recommended Book Resources

Vivek Kale. (2017), Enhancing Enterprise Intelligence, 1st. CRC Press, united states of America, p.378, [ISBN: 9781498705974].

Rick Sherman. (2014), Business Intelligence Guidebook, Morgan Kaufmann, p.550, [ISBN: 9780124114616].

Supplementary Book Resources

Efraim Turban. (2007), Decision Support and Business Intelligence Systems, Prentice Hall, p.772, [ISBN: 0131986600].

This module does not have any article/paper resources

Other Resources

[website], Microsoft. Microsoft Power BI Self-paced Learning, Microsoft, https://docs.microsoft.com/en-us/power-b i/guided-learning/

[website], Tableau. Tableau - Guided Learning, Tableau, https://www.tableau.com/learn

[website], Hubspot. Hubspot, Hubspot, https://www.hubspot.com

[website], Microsoft. Microsoft Dynamics 365, Microsoft, https://trials.dynamics.com/

[website], Salesforce. Salesforce CRM, Salesforce, https://www.salesforce.com

Discussion Note: