

Module Title:	Data Analytics
Language of Instruction:	English
Credits:	5
NFQ Level:	8
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	This subject is based in the computer lab. The class is first introduced to contemporary models for technology development.
Module Aim:	Use data gathering, organisation and analysis techniques to gain greater insight to customer needs and personalise the user experience based on customer profiles.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Create a database application using advanced query and reporting techniques using an end user database tool.
LO2	Develop and analyse databases using Structured Query Language (SQL) using efficient query techniques.
LO3	Analyse data from web analytics and public datasets using appropriate technologies.
LO4	Appreciate the strategic context of contemporary information systems within an organisation.
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Data Analysis

Database tools for work with customer data sets. Design a relational database using entity modelling, keyed relationships. Advanced queries for database mining using query authoring in a DBMS end user tool select, joins, grouping, aggregates, parameter. Developing a suite of management reports to assess organisational performance using a DBMS end user tool.

Structured Query Language (SQL)

select, joins, grouping, aggregates, distinct, ordering - all relevant query tool to extract and analyse data using SQL.

Personalisation & Web-analytics

User/customer focused design & user experience Consistent personalisation across channels Recommendation systems & collaborative filtering Implementing web analytics Interpreting web metrics to tune content and user experience The ethical use of user data in personalisation systems

Information Systems for Management

"Three Era" model, data vs. information vs. knowledge, management information systems classification, strategic alignment. New areas in data management e.g. object-oriented databases, noSQL databases, big data, blockchain, public ledgers. Disintermediation of traditional business finance models with De-Fi.

Assessment Breakdown

%

Continuous Assessment

100.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Case Studies	Group project where teams develop web enabled data systems that are one of • Customer relationship management systems. • Transaction Processing Systems • Knowledge Management Systems • Decision Support Systems Individuals are asked to justify aspects of the system in the strategic context of the organisation and rate the system in the different classifications of the Three Era Model During this project students' performance using agile methodology of delivering on milestones buddy work etc. is assessed.	1,2,4	50.00	n/a
Practical/Skills Evaluation	Students are given access to a website with web analytics installed – they are asked to analyse the data and make suggestions on improvement of structure, content and personalisation. Students are asked to discuss whether the data would best be stored in relational databases or more modern databases or public ledgers.	3,4	50.00	n/a

No Project

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Practicals	12 Weeks per Stage	4.00
Independent Learning	15 Weeks per Stage	6.00
Total Hours		138.00

Workload: Part Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	2.00
Independent Learning Time	15 Weeks per Stage	4.00
Total Hours		84.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_BWBUS_B	Bachelor of Business (Honours) Options: in Business or Digital Marketing	8	Mandatory