

## 6.1 Data Journalism [Elective]

<b>Module title:</b>			
Data Journalism			
<b>Module NFQ level</b>	<b>Module number / reference</b>	<b>ECTS Value</b>	<b>Duration</b>
8	BACMH - 27	10	12 weeks
<b>Parent programme(s)</b>		<b>Stage of parent programme</b>	<b>Semester No.</b>
BA (Hons) in Digital Communications & Media Production		Award	One
<b>Teaching and Learning modes</b>	<b>Proportion (% of Total Directed Learning)</b>		
Classroom / Face to Face	100%		
Workplace	-		
Online	-		
Other (Identify)	-		
<b>Entry requirements (statement of knowledge, skill and competence)</b>			
Please see section 4.2 of programme document.			
<b>Maximum number of learners per instance of the module</b>	80		
<b>Average (over the duration of the module) of the contact hours per week</b>	2		
<b>Pre-requisite module title(s) (if any)</b>	N/A		
<b>Co-requisite module title(s) (if any)</b>	N/A		
<b>Is this a capstone module? (Yes or No)</b>	No		
<b>Module-specific physical resources and support required per centre (or instance of the module)</b>			
Classroom, web-enabled in-class computer with projector, whiteboard.			
<b>Specification of the qualifications (academic, pedagogical and professional/occupational) and experience required of staff working in this module.</b>			
<b>Role e.g. Tutor, Mentor etc</b>	<b>Qualifications &amp; experience required:</b>	<b># of Staff with this profile (WTEs)</b>	
Lecturer	Lecturing staff are required to hold at least a master’s degree in a humanities (communications) discipline and/or an equivalent professional qualification. Industry experience is beneficial but not a requirement. Lecturing staff are also expected to have, or to be in the process of acquiring, a Certificate in Education, Learning and Development qualification from Griffith College or its equivalent.	.15	
Guest Speaker	Expert working with data journalism.	N/A	

Analysis of required learning effort		
*Effort while in contact with staff	Minimum ratio teacher / learner	Hours
Classroom and demonstrations	1:80	48
Mentoring and small-group teaching	1:20	12
Other (specify)	-	-
Independent Learning		
Directed e-learning (hours)		
Independent Learning (hours)		190
Other hours (specify)		-
Work-based learning hours of learning effort		-
<b>Total Effort (hours)</b>		<b>250</b>

Allocation of Marks					
	Continuous Assessment	Supervised Project	Proctored Practical Exam.	Proctored Written Exam	Total
Percentage Contribution	100%				100%

### 6.1.1 Module aims and objectives

#### Aims

This module aims to equip learners with the knowledge and skills necessary to effectively collect, analyse, and visualize data for journalistic storytelling. It fosters critical thinking and ethical considerations in learners when working with data, promoting responsible and accurate reporting. It aims to prepare learners to excel in data-driven journalism roles and adapt to the evolving landscape of digital media and communications. The module aims to empower learners to leverage data journalism techniques for diverse career paths, including journalism, public relations, marketing, research, and social media campaigns. These skills are also transferable for research and data analytics, a strong emerging market in Ireland.

#### Objectives

The objectives of the module are to enable learners to:

- (i) Develop proficiency in data collection methods, including sourcing, cleaning, and organizing datasets relevant to journalistic stories.
- (ii) Enhance data analysis skills through the application of statistical techniques, data visualization tools, and software commonly used in data journalism.
- (iii) Cultivate a strong understanding of data ethics, privacy, and the responsible use of data in journalism, public relations, and marketing contexts.
- (iv) Create data-driven multimedia journalism pieces, such as infographics, interactive charts, and data-driven stories, to engage diverse audiences and enhance storytelling.

### **6.1.2 Minimum intended module learning outcomes**

On successful completion of this module, learners are able to:

- (i) Identify, assess, and select relevant and credible data sources for journalistic storytelling and content creation.
- (ii) Demonstrate the ability to clean and pre-process raw datasets effectively, ensuring data quality, consistency, and usability for media content production.
- (iii) Create and interpret data visualisations and infographics to effectively communicate complex information in a digestible fashion to various media consumers.
- (iv) Apply ethical principles in data journalism, including issues related to privacy, bias, and the responsible use of data in media content creation.
- (v) Construct data-driven narratives to convey complex information in compelling and engaging ways across various media platforms.

### **6.1.3 Rationale for inclusion of the module in the programme and its contribution to the overall MIPLOs**

This Data Journalism module is a final year elective on the BA (Hons) in Communications and Media Production; it responds to the increasing demand for digital communication professionals who can harness the power of data to tell compelling stories. In an age of information abundance, the ability to collect, analyse, and visualise data is essential for modern journalism, public relations, marketing, research, and social media campaigns.

On this module, learners attain the expertise needed to navigate the complex landscape of data-driven communications. Learners who successfully complete the module can use the skills acquired in diverse career paths. Data journalism skills are highly transferable, benefiting those who become journalists, and also public relations executives, marketing professionals, and media content creators. Additionally, as digital communication professionals, learners will often work in collaborative teams, making it crucial to understand how to conceive and implement data-driven social media campaigns effectively.

By achieving the module's objectives, learners will not only become adept data journalists but also ethical, responsible, and critical thinkers capable of leveraging data for accurate, engaging, and impactful storytelling in a variety of professional settings.

In the context outlined above the module learning outcomes align with MIPLOs 1, 2, 3, 4, 6 and 9, and 12.

### **6.1.4 Information provided to learners about the module**

Learners enrolled on this module initially receive a copy of the module descriptor, assessment briefs and assessment strategy. These materials are given directly by the lecturer but also by the year head as part of the Learner Handbook. All content is provided on Moodle as well as access to additional content through the library and online resources.

In class, learners are provided with / directed to, lecture notes, case studies, additional reading materials and lists, incorporating academic and professional sources. A guest lecture will be delivered by an expert working in the data journalism field, providing learners with additional practical knowledge and real-life examples.

### 6.1.5 Module content, organisation and structure

The module covers the following:

- **Introduction to Data Journalism:** An overview of what data journalism is, its role in modern media, and the value it brings to storytelling, conveying complex information to various audiences.
- **Data Visualization Principles:** Understanding and exploring the fundamentals and principles of effective data visualization, including chart types, colour choices, and best practices for conveying information visually. How to create effective charts, graphs, and infographics using user-friendly tools to enhance data-driven storytelling.
- **Tools for Data Journalism:** Suitable data visualization and analysis tools which do not require advanced computing skills.
- **Case Studies and Examples:** Real-world examples of successful data journalism projects and their impact on media consumers; showcasing the practical applications of data journalism in various contexts, including how data has also been effectively used in public relations, marketing, and other media content creation roles.
- **Data Sourcing and Evaluation:** Methods for finding reliable data sources, assessing data quality, and ensuring accuracy in reporting. How to find and assess data sources for credibility, relevance, and accuracy, including government databases, academic research, and public datasets.
- **Data Cleaning and Preparation:** Introduction to basic data cleaning techniques, such as handling missing values, outliers, and inconsistencies. Preparing raw datasets for analysis, focusing on tasks such as removing duplicates, handling missing data, and standardizing formats. Understanding key statistical literacy.
- **Ethical and Legal Considerations:** Exploration of data ethics, privacy concerns, bias, and other legal aspects related to collecting and using data for journalistic and for wider digital communications purposes.
- **Storytelling with Data:** Techniques for transforming data into compelling narratives, selecting the right data points, and structuring a data-driven story for various media formats. Effectively conveying complex information to diverse media consumers through compelling stories.
- **Practical Data Projects:** Weekly, interactive, in-class discussion of learners' data-driven journalism assignments (e.g.: infographics, interactive charts, data-driven articles) which are tailored to their field of interest (e.g., politics, health, or environmental issues).

### 6.1.6 Module teaching and learning (including formative assessment) strategy

This module is supported with structured web-based resources and applies the use of the programme Teaching, Learning and Assessment methodologies. Specifically, the module is delivered using interactive, weekly lectures of two hours, where theory, examples and practical instruction are delivered.

In weekly lectures the learners' understanding and their practical skills are developed, building on each lecture. Staggered assignment submission dates allows learners space to discuss their ongoing work, and reflect on feedback on submitted work.

The data journalism space is constantly evolving with new tools and techniques developed regularly. Contemporary best practice tools will be used when the module is being delivered.

Activity	Teaching / Learning Strategy	Learning Environment
Lectures, Tutorials, (24 hours)	Formal lectures, demonstrations and in-class discussion.	College
Independent work (101 hours)	Self-directed work, researching, developing, experimenting, producing.	College / Home

### 6.1.7 Work-based learning and practice-placement

There is no work based learning or practical placement in the module.

### 6.1.8 E-learning

Griffith College uses Moodle, a virtual learning environment, to support its delivery of e-learning activities in the form of peer-to-peer support based around activities where learners give and receive feedback, forums where learners must contribute, formative quizzes and video links.

### 6.1.9 Module physical resource requirements

Classroom with requisite digital screening and lecture recording equipment. (VLE) Virtual Learning environment (Moodle). Access to Lynda.com.

### 6.1.10 Reading lists and other information resources

#### Primary reading

Bounegru, L. & Gray, J. (2021) *The Data Journalism Handbook 2: Towards a Critical Data Practice*. Amsterdam: Amsterdam University Press. <https://doi.org/10.2307/j.ctv1qr6smr>. Available at: <https://datajournalism.com/read/handbook/two>. (Accessed: 14th September, 2023).

Bourgault, J. (2023) 'How the Global Open Data Movement is Transforming Journalism.' Available at: <https://www.wired.com/insights/2013/05/how-the-global-open-data-movement-is-transforming-journalism/> (Accessed: 8th September, 2023).

Bradshaw, P. (2022) 'This is where data journalists get their ideas from: A guide to generate data journalism stories.' 18<sup>th</sup> May. Available at: <https://datajournalism.com/read/longreads/data-journalism-ideas>. (Accessed: 13<sup>th</sup> September, 2023).

Díaz-Struck, E., Schilis-Gallego, C. & Romera, P. (2023) 'Infrastructuring Collaborations Around the Panama and Paradise Papers.' Available at: <https://datajournalism.com/read/handbook/two/working-with-data/how-icij-deals-with-huge-data-dumps-like-the-panama-and-paradise-papers>. (Accessed: 13<sup>th</sup> September, 2023).

Global Investigative Journalism Network (2023) 'Data Journalism Top 10: Global Migration, EU Pesticides, Russian Occupation, a Congressman's Lies.' 3<sup>rd</sup> February. Available at: <https://gijn.org/stories/data-journalism-top-10-global-migration/>. (Accessed: 13<sup>th</sup> September, 2023).

MySQL (2023) 'The world's most popular open source database.' Available at: <https://www.mysql.com/> (Accessed: 13<sup>th</sup> September, 2023).

Open Data Handbook (2023) 'Guides, case studies and resources for government & civil society on the "what, why & how" of open data.' Available at: <https://opendatahandbook.org/>. (Accessed: 13<sup>th</sup> September, 2023).

Outwit Services (2023) 'Harvest the Web: Simply Turn Websites Into Structured Data.' Available at: <http://www.outwit.com/>. (Accessed: 6<sup>th</sup> September, 2023).

Ricchiardi, S. (2022) 'Data drives media coverage of climate refugees: Giving voice to "world's forgotten victims"'. 13<sup>th</sup> December. Available at: <https://datajournalism.com/read/longreads/data-coverage-of-climate-refugees>. (Accessed: 6<sup>th</sup> September, 2023).

Ruzicka, E. (2022) 'How to create data visualisations that serve the public: Making data visualisations accessible to everyone.' 8<sup>th</sup> December. Available at: <https://datajournalism.com/read/longreads/accessible-data-visualisation>. (Accessed: 13<sup>th</sup> September, 2023).

The Guardian (2023) 'Data journalism.' Available at: <https://www.theguardian.com/media/data-journalism>. (Accessed: 13<sup>th</sup> September, 2023).

Visual Capitalist (2023) 'Making the world's information more accessible.' Available at: <https://www.visualcapitalist.com/>. (Accessed: 13<sup>th</sup> September, 2023).

## Secondary reading

Data Commons Graph (2023) 'Data Sources.' Available at: <https://docs.datacommons.org/datasets/> (Accessed: 13<sup>th</sup> September, 2023).

Ember (2023) 'World-class open data at your fingertips.' Available at: <https://ember-climate.org/data/>. (Accessed: 13<sup>th</sup> September, 2023).

European Parliament (2023) 'Funding from the European Parliament to European political parties per party and per year.' Available at: <https://www.europarl.europa.eu/contracts-and-grants/files/political-parties-and-foundations/european-political-parties/en-funding-amounts-parties-2023.pdf> (Accessed: 13<sup>th</sup> September, 2023).

European Social Survey (2023) 'ESS Data Portal.' Available at: <https://ess-search.nsd.no/> (Accessed: 13<sup>th</sup> September, 2023).

Inkscape (2023) 'Inkscape: Draw Freely.' Available at: <https://inkscape.org/>. (Accessed: 6<sup>th</sup> September, 2023).

Our World In Data (2023) 'Research and data to make progress against the world's largest problems.' Available at: <https://ourworldindata.org/> (Accessed: 13<sup>th</sup> September, 2023).

## eResources

Anaconda (2023) 'Host, run, and code Python in the cloud!' Available at: <https://www.pythonanywhere.com/> (Accessed: 13<sup>th</sup> September, 2023).

R Markdown (2023) 'Analyze. Share. Reproduce. - Your data tells a story. Tell it with R Markdown.' Available at: <https://rmarkdown.rstudio.com/> (Accessed: 13<sup>th</sup> September, 2023).

Shander, B. (2023) 'Data Visualization: A Lesson and Listen Series. Lesson: Data journalism. LinkedIn Learning. Available at: <https://www.linkedin.com/learning/data-visualization-a-lesson-and-listen-series/lesson-data-journalism?u=2189292> (Accessed: 13<sup>th</sup> September, 2023).

Google (2023) 'Make data-driven decisions, in Google Sheets.' Available at: <https://www.google.com/sheets/about/> (Accessed: 13<sup>th</sup> September, 2023).

Web Scraper (2023) 'Powerful web scraper for regular and professional use.' Available at: <https://www.webscraper.io/> (Accessed: 13<sup>th</sup> September, 2023).

### 6.1.11 Specifications for module staffing requirements

Lecturing staff are required to hold at least a master's degree in a humanities (communications) discipline and/or an equivalent professional qualification. Industry experience is beneficial but not a requirement. Lecturing staff are also expected to have, or to be in the process of acquiring, a Certificate in Education, Learning and Development qualification from Griffith College or its equivalent.

### 6.1.12 Module summative assessment strategy

The three assignments assess the MIMLOs by progressively building learners skills in data sourcing, cleaning, visualization, and storytelling while emphasizing ethical and responsible data journalism practices. The weighting of each assignment reflects its complexity and importance in the overall assessment of the module. Formative assessment is carried out weekly by requiring learners to discuss their ongoing research and difficulties or successes they are having.

No.	Description	MIMLOs	Weighting
1	Assignment #1: Data Source Evaluation and Selection	(i) to (v)	20%
2	Assignment #2: Data Cleaning and Interactive Data Visualization	(i) to (v)	30%
3	Assignment #3: Data-Driven Multimedia Report	(i) to (v)	50%

#### Reassessment/Repeat assessment strategy:

Griffith College regulations state that learners must pass all component elements of the module to be deemed to have passed the module.

- In the event of a learner failing a component or components of this module, they will be required to submit a new individual repeat assignment which will be made available on Moodle to learners, and which must be submitted as per faculty instructions.
- In the event of a learner failing the group assessment element of this module, a new individual repeat assignment will be made available on Moodle to learners which must be submitted as per faculty instructions.
- In the event of the learner failing the exam, learners will take the re-sit exam at the next available sitting, details of which will be made available to learners via Moodle.