

<b>Module code</b>	<b>DSC502</b>	<b>Level</b>	5
<b>Module title</b>	<b>Coding</b>		
<b>Status</b>	Core		
<b>Teaching Period</b>	Autumn		
<b>Courses on which the module is taught</b>	BA (Hons) Business and Data Science BSc (Hons) Digital Marketing and Analytics		
<b>Prerequisite modules</b>	None		
<b>Notional learning hours</b>	200	<b>Credit value</b>	20
		<b>ECTS Credits</b>	10
<b>Field trips?</b>	Optional subject to industry events		
<b>Additional costs</b>	None		
<b>Content notes</b>	None		

### 1. Module description

Coding has quickly become one of the data science professional's most crucial skills. In this module, you'll be equipped with a core understanding of the key concepts and techniques required for coding. By exploring basic concepts, such as data types, logic flow, functions, and packages, you will gain the critical skills necessary to manipulate, analyse and visualise data. On successful completion of this module, you will be a keen, confident, and data-focused coder, having gained essential skills for a career in the commercial world.

### 2. Learning Outcomes

*Upon successful completion of this module, you will be able to:*

#### **Communication (MLO5):**

Communicate effectively in the context of the documentation and commenting of generated program code.

#### **Digital Data and Tools (MLO6):**

Analyse and use digital tools and data responsibly in coding contexts.

#### **Discipline Knowledge (MLO7):**

Examine and apply statistical and coding concepts and theories.

### 3. Learning and teaching methods, and reasonable adjustments

In this module, we encourage active learning and place you at the centre of your educational journey. Through lab-based session on diverse platforms, and weekly engagements students will learn analytical skills and be involved practical applications of statistical and theoretical concepts, through collaborative activities, exercises, discussions, and reflections. Students will sharpen their communication skills by effectively conveying their coding insights for decision making. Additionally, students will become proficient in the responsible analysis and utilisation of digital tools and data, and gained in-depth knowledge of statistics and coding concepts, in alignment with industry demands. These skills prepare students to excel in the dynamic world of business.

<b>Learning hours</b>			<b>200</b>
<b>Directed learning</b>			<b>48</b>
Workshops/ classes/ seminars/ lead events	Supervision	Studio time	Other
48			
<b>Guided/Self-guided learning</b>			<b>152</b>

Reasonable adjustments will depend on a Student Support Agreement and will acknowledge accrediting body requirements. In urgent or serious situations, reasonable adjustments might be required before the Student Wellbeing & Disability Team has been able to complete a full assessment. This will usually be where a student has a severe or urgent condition and either communicates this condition to a member of staff or their behaviour is suggestive of an adjustment need. Staff may put temporary reasonable adjustments in place to support the student. These adjustments must then be promptly communicated to the Student Wellbeing & Disability Team by the staff member who made the temporary adjustments. The Student Wellbeing & Disability team will capture and confirm appropriate reasonable adjustments (which may include changing the temporary adjustments, adding in other adjustments and outlining the period of time for which they apply) in a Student Support Agreement ('SSA').

#### 4. Assessments and weighting, reasonable adjustment, and feedback methods

##### Assessment component 1: Project (100%), Maximum 2500 words, or equivalent

As an individual project, explore a coding challenge which combines coding and data visualisation, by implementing a project in R or Python. Document your coding, the development process, and possible improvements for a next hypothetical cycle of code development in a supporting document.

Mapping of assessment tasks:

Assessment components	MLO5	MLO6	MLO7
Individual Coding Project	X	X	X

The above assessment components are summative. Students will have the opportunity for formative assessment and feedback before each summative assessment.

#### 5. Indicative resources

[Tutorial: Get started creating in the Power BI service - Power BI | Microsoft Learn](#)  
[Power BI on Microsoft Learn | Microsoft Learn](#)  
[Learning Library | JMP](#)

Healy K (2019). Data Visualization: A Practical Introduction. Princeton University Press, Princeton

Knaflic, C. N. (2015). Storytelling with data: a data visualization guide for business professionals. Hoboken, New Jersey, John Wiley & Sons, Inc.