1. **Title of the module**

MAST5954 (MA5954) Communicating and Presenting Results

1. **School or partner institution which will be responsible for management of the module**

School of Mathematics, Statistics and Actuarial Science

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 5

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Spring

1. **Prerequisite and co-requisite modules**

Pre-requisite: None

Co-requisite: None

1. **The programmes of study to which the module contributes**

\*Standard Programme Title\* with a Year in Data Analytics

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**
2. demonstrate knowledge and critical understanding of the underlying concepts and principles of data visualisation;
3. demonstrate the capability to use a range of established data visualisation techniques in appropriate media;
4. select and deploy appropriate data visualisation techniques in the communication and presentation of results of data analyses;
5. make appropriate use of statistical software.
6. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**
7. make effective use of IT facilities for solving problems;
8. demonstrate the skills needed to work and communicate in a group, including an understanding of the roles of different individuals within a team;
9. communicate straightforward arguments and conclusions reasonably accurately and clearly;
10. manage their own learning and development;
11. communicate technical and non-technical material competently;
12. present and debate using data;
13. apply techniques from different academic disciplines to a problem;
14. demonstrate critical thinking skills.
15. **A synopsis of the curriculum**

The module will begin by reviewing simple data presentation techniques such as graphical and numerical summaries and consider how these can be used to appropriately present data. The module will then develop these themes through the use of more advanced graphical summaries and data visualisation methods (including their production in a suitable statistical software package), the presentation of results in different media and the reporting of complicated analyses (including the correct interpretation of results and discussion of modelling assumptions).

Syllabus: Review of simple data presentation; Appropriate use of graphics; presenting data in different media; advanced graphics using a package such as the R Shiny package; Writing a report about a more complicated data analysis (discussing assumptions and interpreting results); automating report writing using a package such as the R Markdown package.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

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

W. Chang (2013) R Graphica Cookbook: Practical Recipes for Visualizing Data. O”Reilly

H. Wickham (2010) ggplot2: Elegant graphics for data anlysis (Use R!). Springer

H. Wickham and G. Grolemund (2017) R for Data Science. O’Reilly.

P. Bruce (2017) Practical Statistics for Data Scientists: 50 Essential Concepts. O’Reilly.

1. **Learning and teaching methods**

30 contact hours comprising a series of workshops

120 hours of private study

Total number of study hours: 150

1. **Assessment methods**
	1. Main assessment methods

The module will be assessed by 100% coursework.

Group project report on an analysis in a non-written form, requiring on average between 20 and 30 hours to complete (50%).

Individual written report – up to 10 pages (50%)

13.2 Reassessment methods

100% coursework

1. ***Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)***

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 | 9.6 | 9.7 | *9.8* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Private Study** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Workshop | **X** | **X** | **X** | **X** | **X** |  | **X** |  | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |
| Group project report | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Individual written report | **X** | **X** | **X** | **X** | **X** |  | **X** | **X** | **X** |  |  | **X** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

Data analysis is an international language using internationally recognised techniques developed and refined by statisticians and analysts across the globe. Mastery of the subject-specific learning outcomes, 8.1 to 8.4, will equip students to apply the theories and techniques of this module in a wide range of international contexts. The module team is drawn from the School of Mathematics, Statistics and Actuarial Science/School of Social Policy, Sociology and Social Research, which includes many members of staff with international experience of teaching and research collaboration.

In compiling the reading list, consideration has been given to the range of texts that are available internationally and a selection of texts has been identified to complement the delivery of the material.

Examples with an international dimension are included in the module where appropriate.

The support SMSAS/SSPSSR provides to its students is also internationally attuned given our international student body.

**FACULTIES SUPPORT OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

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| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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