

AC52012

Research Methods

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<http://www.computing.dundee.ac.uk/internal/fullguide.asp?AC52012>

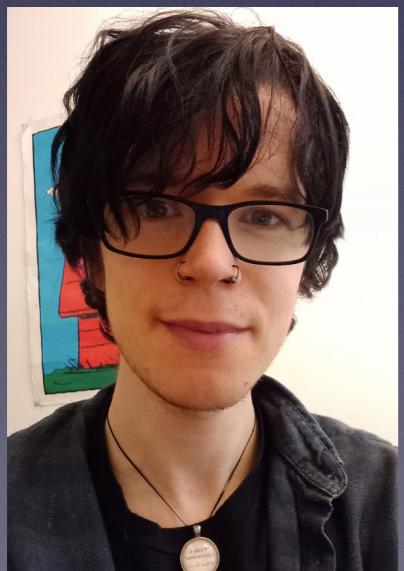
Module Teaching Staff



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Quantitative and qualitative research

- Quantitative:
 - data, preferably large quantities
 - x is prevalent / there's a significant difference between x and y
 - experimental: measuring a dependent variable when manipulating an independent variable
 - a posteriori: assessing acquired data, finding patterns
 - measuring
- Qualitative:
 - examples
 - x can be explained by y / x signifies y
 - analysing exemplars using a theoretical model or analytical approach

Quantitative and qualitative research

| | Quantitative | Qualitative |
|----------------|--|---|
| Conceptual | Concerned with discovering fact | Concerned with understanding behaviour (usually from the informants perspective) |
| | Assumes a fixed measurable reality | Assumes a dynamic negotiated reality |
| Methodological | Data collected through measuring things | Data collected through observation and interviews (often of participants) |
| | Data analysed through numerical comparisons and statistical inferences | Data analysed with a theoretical model or analytical approach |
| | Data are reported through statistical analysis | Data are reported in the language of the informant |

Lecture Schedule

| Week beginning: | |
|-----------------|---|
| 1: 15 Jan | L01: Introduction & Overview; What is Science? |
| 2: 22 Jan | L02: Introduction to Statistics |
| 3: 29 Jan | L03: The Basics of Probability |
| 4: 5 Feb | L04: Sampling and Testing |
| 5: 12 Feb | L05: Populations |
| 6: 19 Feb | L06: Introduction to Qualitative Methods method |
| 7: 26 Feb | L07: Interviewing as a Qualitative Research; Ethics Lab |
| 8: 4 March | L08: Conducting the interviews |
| 9: 11 March | L09: Thematic Analysis |
| 10: 18 March | L10: Write-up |

Subject to change!

Things to note

| Week beginning: | |
|-----------------|---|
| 1: 15 Jan | |
| 2: 22 Jan | |
| 3: 29 Jan | |
| 4: 5 Feb | |
| 5: 12 Feb | Quantitative Coursework due (end of week) |
| 6: 19 Feb | |
| 7: 26 Feb | Ethics Lab (not assessed) |
| 8: 4 March | |
| 9: 11 March | |
| 10: 18 March | Qualitative Coursework due (end of week) |

Subject to change!

Assessment

- 50% coursework
 - 25% quantitative: due end of week 5
 - 25% qualitative: due end of week 10
- 50% class test
 - evaluates understanding of both parts of the module

Week by week

- *Tuesday:*
 - Seminar 9:00 - 11:00am on campus
(venue tbc)
- *Wednesday:*
 - Lab 2:00 - 4:00pm in QMB labs 0-2

Week by week

- Self-directed materials:
 - Video lectures
 - Reading
 - Project work
- Labs, seminars:
 - Variety of tasks to complete

Ethics Lab

- The Ethics Lab will consist of a series of short group presentations each of around 15 minutes, on a topic of your choice on ethics in science. Each group will present to the class. After the presentations, we will have a discussion on ethics in science.
- Please note that this work will not be formally assessed.

Ethics Lab

Suggested topics include:

1. Does the Post Office Scandal teach us anything about trust in computers over people?
2. How is diversity in design an issue, and how can we help?
3. How did the Cambridge Analytica scandal affect how we think of our data?
4. What does Responsible Research and Innovation mean for your area of research?
5. Do scientists have a duty to be climate activists?

Additional support

- Module Lecturers: apease@dundee.ac.uk,
drough001@dundee.ac.uk,
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- Disability Support: apease@dundee.ac.uk
- Advisor of Studies

the enquiry Centre

advice • help

information • Choices

Guidance • Support

Care
Coun
Frog
Nur
Res
He
Stu
Peer
Aca
Stu
Dis
Inte
Sup

Open 12.00-16.00 Monday to Friday
the Enquiry Centre has moved to GUSA