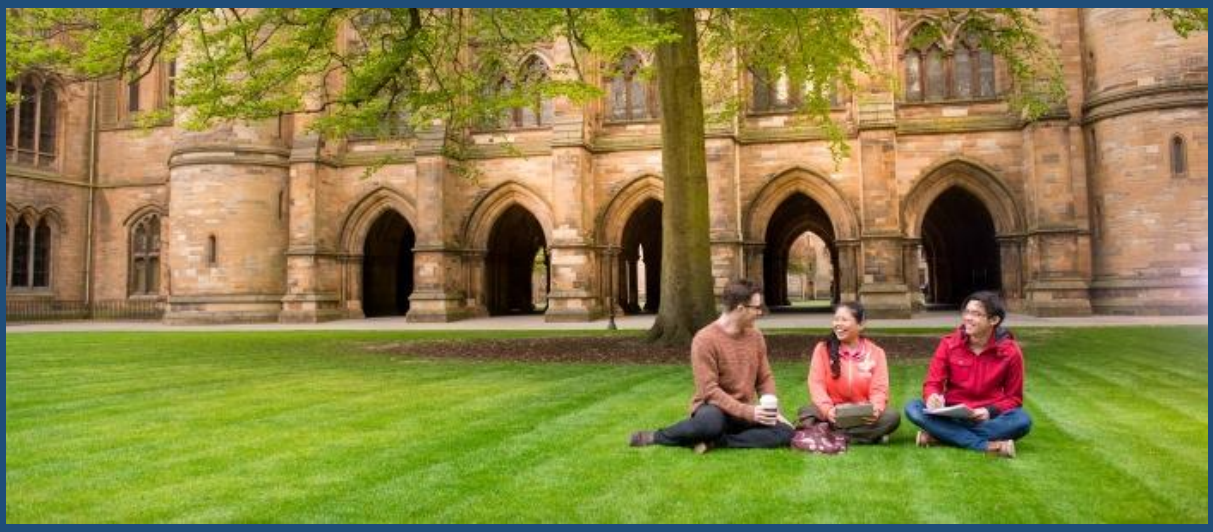

Hello All!

I'd like to announce the 4th Annual University of Glasgow's Q-Step Centre's Summer School: Monday, 24 August – Thursday 27 August 2020.

This year we are expanding our free course offerings to include:

- **Introduction to R/ RStudio**
- **Introduction to RMarkdown: Dynamic documents and reproducible research**
- **Introduction to Machine Learning**
- **Maximum Likelihood for Generalized Linear Models**
- **Choosing your Epistemological Pathway in Qualitative Methods**

Each course in our Research Methods Summer Program **is free to attend** and will be delivered online this year. Places are limited, therefore it is essential to register early and only reserve a place if you are able to join us. Course offerings range from ½ to 2-day sessions. We hope you find something of interest and join us in August! (Course descriptions available further below)

For questions, please contact us at **socsci-qstep@glasgow.ac.uk** with the subject heading "**Summer School Questions**".

To register, please follow the links to the appropriate Eventbrite page. **Registration closes 14 August 2020**! We look forward to seeing you this summer!

Best wishes,

Dr. Niccole M. Pamphilis and the Q-Step Team at Glasgow

Course Descriptions:

Courses are free to attend, though advanced registration is required as spaces are limited.

Introduction to R/ RStudio: 24 August 2020 (**15:00 - 17.00**)

Instructor: Dr. Thees Spreckelsen

Summary: As quantitative data becomes more accessible researchers are turning to software that can do more and is free to access. This course will walk you through the basics of R/RStudio, from how the interface should look on your computer, the language of R, installing packages, and basic command structures.

Prerequisites: Access to R/RStudio

Delivery: Zoom Meeting with demonstrations and practical sessions, in addition to online material

Capacity: 20 places

Registration: Free registration; but limited spaces available

Eventbrite Link:
https://www.eventbrite.co.uk/e/introduction-to-r-rstudio-tickets-107610531998

Introduction to RMarkdown: Dynamic documents and reproducible research:

25 August 2020 (**10:00 – 16:00**)

Instructor: Dr. Thees Spreckelsen

Summary: An essential part of quantitative analyses is to document what we do as well as presenting our results. RMarkdown, an add-on to R/RStudio, allows you to generate documents including R results, and R code. This is referred to as "dynamic documents" since when you change your analyses your document also changes. Dynamic documents allow you to be highly transparent about what you do, since you can record and show exactly what you have done together with how you interpreted it.

The real magic of doing this in RMarkdown is that you can write one file that you can turn into a text document, a presentation, or even a website.

Prerequisites: Access to RStudio and knowledge on how to install packages in R.

Delivery: Zoom Meeting with demonstrations and practical sessions, in addition to online material

Capacity: 20 places

Registration: Free registration; but limited spaces available

Eventbrite Link:
https://www.eventbrite.co.uk/e/introduction-to-rmarkdown-dynamic-documents-and-reproducible-research-tickets-107673010874

Choosing your Epistemological Pathway in Qualitative Methods:

26-27 August 2020 (**10:00 - 16:00** each day)

Instructor: Dr. Jo Ferrie

Summary: This two day training course is designed to give you an overview of Qualitative Methods and will focus on:

- The history of the approach to better understand its roots and its potential.
- An introduction to Grounded Theory
- An introduction to Phenomenology
- An introduction to Discourse Analysis

By the end of the 2 days you should feel more confident in choosing a qualitative pathway for your research, able to defend why this pathway works with your research question and able to defend why alternative pathways are limited. You will also have experience analysing data including research interviews, focus groups, newspaper articles and letters, and will have practiced descriptive and theoretical coding. Have your coloured pens handy!

Prerequisite: The training is available to anyone interested in how qualitative research works. It will work at an introductory level and as a refresher course for those more advanced.

Delivery: Zoom Meeting

Capacity: 40 places

Registration: Free; but limited spaces available

Eventbrite Link:
https://www.eventbrite.co.uk/e/choosing-your-epistemological-pathway-in-qualitative-methods-tickets-107677997790

Introduction to Machine Learning: 26-27 August 2020 (**10:00-16:00** each day)

Instructor: Dr. Nema Dean

Summary: Machine learning methods involve methods that deal with multivariate data, learning hidden structures and prediction. In particular within

prediction methods, classification is a special case where explanatory variables are used to predict which one of a number of classes an object belongs to, e.g. is an email spam or not spam, is a person likely to vote for a particular party over the others, etc. For multivariate data you may wish to reduce the number of variables for either simpler modelling or to try to discover hidden concepts within the data.

This course will look at a subset of these types of methods including: principal component and a brief discussion of factor analysis, classification using k-nearest neighbours, classification and regression trees and discriminant analysis classification. In addition to lectures giving background on the methods and the intuition behind them to aid understanding, there will be computing sessions in R showing how to implement these methods on real data examples.

Prerequisites: Familiarity with R is **essential** and basics of statistics (linear regression, normal distributions and probability) are needed.

Delivery: Zoom Meeting

Capacity: 25 places

Registration: Free registration; but limited spaces available

Eventbrite Link:
https://www.eventbrite.co.uk/e/course-introduction-to-machine-learning-tickets-107690659662

Introduction to Maximum Likelihood Estimation:
26-27 August 2020 (**10:00-16:00** each day)

Instructor: Dr. Niccole Pamphilis

Summary: This course offers participants an introduction to a range of statistical models beyond those available using standard linear regression analysis. The course will teach participants about logit and probit models for dependent variables with binary outcomes as well as ordered models and multinomial models for categorical dependent variables. Participants will learn about the assumptions of each model and how to properly test if the model assumptions hold in addition to expressing model results graphically. This course will combine discussion of model assumptions and requirements as well as practical experience running the models with real data and interpreting results.

Prerequisites: Familiarity with R and basics of statistics (linear regression, normal distributions and probability) are needed

Delivery: Zoom Meeting

Capacity: 25 places

Registration: Free; but limited spaces available

Eventbrite Link:
https://www.eventbrite.co.uk/e/introduction-to-maximum-likelihood-estimation-tickets-107696870238