Methods for Social Analysis and Statistics (MFSAS)

Prospectus
Train with the experts in bridging the gap between statistics and social policy

As one of Australia’s largest social science institutions, researchers at The University of Queensland’s Institute for Social Science Research address some of the most important issues and challenges facing the country today. ISSR’s work is broad, multi-disciplinary, and informed by the latest developments in social science theory and methods. We deliver commercial services and expert training to public and private sector organisations, bridging the gap between those who work with statistics, and those who need to apply them as part of creating effective policies.

The MFSAS Program

The Methods for Social Analysis and Statistics (MFSAS) program is designed for those who need to use, understand, and interpret statistical information, but who may not necessarily have a background or training in statistics. Our workshops are ideal for professionals in government departments, agencies, non-government organisations, university staff and postgraduate students who want to learn more about methods for social analysis and translate scientific social research into public policy outcomes.

MFSAS workshops provide participants with practical skills and content-relevant knowledge that they can immediately apply in their work, such as:

- **How to** construct, collate and interpret questions of social significance
- **How to** use social data to inform evidence-based policies and programs
- **How to** recognise the quality and robustness of research sources

Essential Social Analysis Skills

(3 days)

This course is designed to provide participants with the essential skills to analyse and interpret quantitative (numeric) social data. Participants will develop an understanding of the appropriate statistical techniques to use for different types of research questions and different types of data and importantly how to make inferences and interpret results.

**Topics covered**
- Understanding and testing for statistical significance
- Assessing relationships using Chi square, t-tests, ANOVA, and correlation
- Introduction to linear and logistic regression models
- Data visualization

**Learning objectives**
- Understand why and how to test for statistical significance
- Know the appropriate statistical tests to use in different situations and with different types of data
- Read and interpret the results of statistical tests and output from popular statistical packages
- Critically review the use of statistics in reports and published papers

Gathering Qualitative Data Course

(2 days)

This course will enable participants to understand the results from administrative or survey data by investigating these findings in more depth through qualitative methods. It will cover skills to gather data from stakeholders through interviews, focus groups or visual methods in order to make evidence-informed decisions and ensure that surveys provide valid and reliable data.

**Topics covered**
- Designing research using the appropriate qualitative method(s)
- Planning research (including budget, ethics, sampling, participant recruitment and logistical arrangements)
- Developing interview guides, consent forms and information sheets
- Interviewing with confidence (including interview skills, facilitation skills, interview and focus group practice and feedback opportunities)
- Understanding other qualitative methods such as observation, ethnography, cognitive/retrospective interviews, visual methods, and online methods

**Learning objectives**
- Gain knowledge and skills to understand, design and conduct high quality qualitative research to inform evidence-informed decisions
- Understand the complementarity between qualitative and quantitative methods
- Critically review the quality of qualitative findings in reports, policy briefs and published papers

Program Evaluation Course

(1 day)

This one-day introduction to Program Evaluation introduces key evaluation concepts and techniques. It provides participants with the foundational skills to plan or commission an evaluation.

**Topics covered**
- Key evaluation language, concepts and techniques
- Rationale and principles of evaluation, including the types of evaluation, application and timing
- Developing the Program Logic and Theory of Change
- Monitoring and measuring success - selecting appropriate indicators and identifying data sources
- Interpreting and effectively communicating evaluation findings

**Learning objectives**
- Understand which types of evaluation are possible, and determine when each should be applied
- Identify ethical issues that may impact the evaluation process
- Document a Program Logic and articulate a Theory of Change
- Identify appropriate indicators for a program evaluation
- Understand the value of quantitative and qualitative data
- Determine appropriate analytical approaches
- Identify appropriate modes for sharing evaluation results with different stakeholders
**Social Cost-Benefit Analysis Course (3 days)**

This course is designed for professionals who need to engage with CBAs to aid the design and evaluation of public programs and policies, and need hands-on skills to conduct CBAs.

**Topics covered**

- What is CBA? The role in public sector decision-making
- Economic principles and criteria underlying CBA as distinct from financial analysis
- Introducing concepts of discounting, Discounted Cash Flow (DCF) analysis, Net Present Value (NPV), Benefit/Cost Ratio (BCR) and Internal Rate of Return (IRR)
- SROI as a variant of CBA for projects with intangible costs and benefits
- Using Sensitivity Analysis to allow for uncertainty
- Step-by-step demonstration of CBA applied to a social project for project appraisal
- Applying decision rules in CBA using Excel
- Identifying and valuing costs and benefits in CBA
- Methods and techniques of non-market valuation and data sources for including intangibles in CBA
- Assessment of Social Return on Investment (SROI) Analysis and an overview of the Queensland Government’s framework for Social Impact Analysis (SIA)
- A case study using CBA

**Learning objectives**

- Understand the rationale for CBAs, key concepts and economics principles underlying them, and how they can assist the policy and project decision-making process
- Learn basic processes and methods for undertaking CBA
- Discuss the need for the valuation and incorporation of non-monetary costs and benefits, including those of a social and/or intangible nature
- Appreciate SROI as a method to appraise projects with mainly intangible costs and benefits, and Social Impact Analysis (SIA) as prescribed by Queensland Government
- Understand the limitations of CBAs, including appropriate uses and caveats in interpretation of results
- Have practical experience using basic CBA processes and methods
- Demonstrate a basic proficiency in the use of spreadsheet-based CBAs
- Understand how to apply Sensitivity Analysis and Threshold Analysis techniques using Excel

**Testimonials**

**Essential Social Analysis Skills**

This course will help me in doing my research work in a more efficient way. All researchers, particularly social health and business researchers, should complete this course in order to do their jobs more accurate and efficient.

Md. Mehedi Hasan, UQ HDR student.

**Gathering Qualitative Data**

The course expanded my knowledge of qualitative research and I look forward to applying the knowledge in future.

Karen McNab, Australian Skills Quality Authority.

I feel significantly more confident in conducting research in forum groups and interviews.

Rosa Sottile, Together Qld Branch of the ASU.

**Program Evaluation**

The content was easy to understand, practical and can complement the work I do. A very impressive course for anyone involved in program development and delivery.

Vicki Ogilvie, Department of Education.

**Social Cost Benefit Analysis**

The course gave me a sufficient knowledge of Cost Benefit Analysis (CBA) to assess CBA produced by others. It also gave me knowledge to undertake CBA on existing data, and understanding of requirements of in-depth CBA. This course will benefit me in undertaking my current employment and also future work. Policy analysts and advisers should attend this course.

Ian Jeffreys, RACQ.

**Longitudinal Data Analysis**

The course introduced me to an additional suite of analytical tools, which adds to my range of analytical options and will provide me with additional “leads when looking for patterns in data”. My attendance at this course is the result of a recommendation by a co-worker who took the course - and I, in turn, will be sure to also recommend this course to others. I recommend this course to anyone who has an interest (or need) to determine patterns in the data which reflects events or characteristics over a period of time. Useful juicy stuff!

Dr. Travis Anderson-Bond, Youth Justice – Queensland.
Introduction to Longitudinal Data Analysis and Panel Regression Models (2 days)

This two-day course provides participants with a thorough understanding of the structure, properties and uses of quantitative longitudinal survey datasets, as well the skills to confidently manage and analyse these. It combines comprehensive explanations with hands-on practical sessions using Stata software and data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey.

Topics covered
- Longitudinal data - structure and management
- Exploratory longitudinal data analysis
- Panel regression - Pooled OLS, fixed-effect, random-effect and hybrid models
- Model choice for longitudinal data
- Presentation of results for longitudinal data

Learning objectives
- Understand the advantages of using longitudinal data for research and decision-making
- Manage longitudinal datasets and prepare these for statistical analysis
- Perform exploratory and descriptive panel data analyses
- Understand the different approaches that can be used to model multivariate relationships with longitudinal data (e.g., fixed-effect and random-effect regression models)
- Determine which modelling approach is most appropriate for different types of research questions
- Effectively present longitudinal data analyses results to technical and non-technical audiences

Modelling change and event occurrence (2 days)

This course introduces participants to methods for analysing individual change over time and event occurrence. Theoretical material is combined with examples of applied research using these methods and hands-on sessions using Stata software and data from the Longitudinal Study of Australian Children (LSAC).

Topics covered
- Modelling trajectories of individual change over time
- Simultaneous modelling of change in multiple outcomes
- Methods to account for drop-out from longitudinal studies
- Identifying groups of individuals with similar patterns of change over time
- Models for event-occurrence or time to event outcomes

Learning objectives
- Gain familiarity with multi-level approaches to modelling change over time
- Understand a range of models for change over time and what research questions each can be used to address
- Understand unique features of event history data and how to account for them in modelling
- Interpret research findings derived from models for change and event occurrence
- Clearly communicate results from analyses of change over time and event occurrence
- Apply models for change over time and event occurrence in Stata software

Longitudinal Data Analysis Course (5 days)

This five-day intensive course has been specifically designed to deepen the specialist knowledge of your research teams and enhance the quality and meaning of the data you use when making crucial business decisions.

Topics covered
- Longitudinal data - structures and management
- Exploratory longitudinal data analysis
- Panel regression - Pooled OLS, fixed-effect, random-effect and hybrid models
- Multi-level data and frameworks applied to longitudinal data
- Event history analysis
- Model choice for longitudinal data

Learning objectives
- Understand the advantages of using longitudinal data for research and decision-making
- Manage longitudinal datasets and prepare these for statistical analysis
- Understand the different approaches that can be used to model multivariate relationships with longitudinal data (e.g. fixed and random-effect regression models)
- Recognise hierarchical data and the relevance of multilevel models
- Understand how multilevel models can be used to analyse variation and trends in growth over time with longitudinal data
- Understand how to model duration until an event occurs, using event-history analysis
- Determine which modelling approach is most appropriate for different types of research questions
- Effectively present longitudinal data analyses results to non-technical audiences

Visit our website to learn more about the MFSAS program: www.issr.uq.edu.au

Customised delivery
All MFSA courses can be customised using your own data sets, and can be delivered at your premises. Minimum numbers for customised courses are 10 participants.