

Study Materials and Media Guide

MSc — Master of Science in Health Economics and Data Analytics

Degree awarded	Master of Science (MSc)
Program length	4 semesters
Credits	120 ECTS-equivalent credits
Language	English
Mode of study	Fully online, asynchronous study with scheduled tutorial consultations and analytics labs
Document	Catalogue of study materials

WHAT THIS DOCUMENT CONTAINS

- Reading lists, case packs, datasets, statutes and templates
- Slide dossiers with slide counts, formats and contents
- Video lecture series with duration, lecturer and topic
- Assessment structure and weighting across the program
- Thesis or capstone requirements with the milestone timeline

A quantitative master's degree for professionals who must justify health care decisions with evidence, data and economic reasoning.

1. Study materials

Material	Type	What it contains
Claims and Registry Analytical Dataset	Dataset	Three linked anonymised tables covering five years of encounters, costs and outcomes for coursework and the dissertation pilot.
Cost-Utility Model Template	Template	Fully documented Markov model workbook with probabilistic sensitivity analysis and tornado charts.
HTA Submission Case Pack	Case study	Four real-world style submissions with payer questions, appraisal minutes and final decisions.
Reporting Guidelines Compendium	Reading	CHEERS, STROBE and TRIPOD checklists annotated with worked examples from student work.
Secondary-Use Data Rules	Statute	Curated HIPAA and GDPR provisions governing research use of health data, with commentary.

All materials are released inside the study portal at the start of the relevant course window and remain available to enrolled students for the duration of the program.

2. Lecture presentations

Presentation	Slides	Format	Contents
Why Health Care Markets Fail	46	Annotated deck	Information asymmetry, insurance and induced demand, illustrated with market data.
Building a Markov Model From Scratch	68	Workshop deck	Every step from state diagram to incremental cost-effectiveness ratio and PSA cloud.
Regression Diagnostics You Cannot Skip	52	Annotated deck with code	Residual analysis, influence, multicollinearity and the reporting consequences of each.
Presenting Numbers to a Board	38	Communication workshop	Turning a technical result into three defensible slides without distorting it.

3. Video lecture series

Orientation: the Analyst's Year Ahead

24 min · Programme Director

Software setup, dataset access, deadlines and the dissertation timeline.

Discounting, QALYs and Thresholds

45 min · Faculty of Health Economics

What a QALY is, how thresholds are set and why they are contested.

Difference-in-Differences, Carefully

52 min · Faculty of Health Economics

Parallel trends, event-study plots and the modern staggered-adoption critique.

De-identification in Practice

36 min · Faculty of Medical Law

Safe harbour, expert determination and re-identification risk in linked datasets.

Reproducible Analysis for Your Dissertation

40 min · Academic Skills Unit

Project structure, versioning, seeds and the code package examiners expect.

Lectures are streamed in the study portal with English subtitles and downloadable transcripts. Tutorial consultations are recorded and published within twenty-four hours.

4. Assessment structure

Component	Weight	Description
Analytical projects	50-70%	Models, datasets and code submitted with a written technical report.
Examinations	20-40%	Open-book examinations testing method selection and interpretation.
Defences and simulations	10-30%	Recorded defence of models and a live payer negotiation simulation.
Dissertation	30 credits	Empirical study with reproducible analysis package and oral defence.

5. Master's dissertation (30 credits)

The MSc dissertation is an empirical study of 15,000–18,000 words accompanied by a reproducible analysis package. Topics must address a health economic, outcome or data-governance question and are approved at the end of semester three.

Milestone timeline

- Semester 3: protocol, data-access approval and pre-registration
- Weeks 1-4: data preparation and cohort construction
- Weeks 5-10: primary analysis and robustness checks
- Weeks 11-16: full draft, supervisor feedback and code review
- Weeks 17-18: submission, similarity check and oral defence

6. Tuition reference

Total tuition: USD 4,999 — Total tuition for the complete Master of Science, including datasets, analytical templates, tutorial consultations, examinations and the dissertation defence.