MERCURY

Health Economic Evaluation and Cost-Effectiveness Course

11 – 15 July 2027
Dubai (UAE)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Health Economic Evaluation and Cost-Effectiveness Course

Ref: 15829_1080690 **Date:** 11 – 15 July 2027 **Location:** Dubai (UAE) **Fees:** 4600 Euro

Health Economic Evaluation and Cost-Effectiveness Course is a 1-week advanced course for analysts, pharmacists, clinicians and payer staff who must judge whether a treatment, device or service is worth its cost. You cost interventions, measure outcomes in QALYs and DALYs, build decision tree and Markov models and test them with sensitivity analysis, and you take back a Cost-Effectiveness Appraisal Workbook. Mercury Training Center delivers this health economic evaluation course.

About This Course

Formulary committees, insurers and hospital boards are asked to fund new medicines and services with limited budgets, yet many submissions they receive are hard to check or compare. To follow the course you should already work with clinical, cost or utilization data. You practice by building and testing small models in a spreadsheet.

Who It Is For

- Analysts who prepare or review value dossiers for new treatments and devices.
- Pharmacy and formulary staff who recommend which medicines to list.
- Payer and insurance staff who decide coverage and reimbursement.
- Planning staff who prioritize services and investments within a fixed budget.
- Researchers who add an economic arm to clinical or public health studies.

This course is not for readers who want a broad view of financing, insurance design and reform, who are better served by a longer course on economics and policy of care systems, nor for complete newcomers to spreadsheets and basic statistics, who suit an introductory data analysis course.

Competencies You Will Build

- Evaluation Design: you choose between cost-effectiveness, cost-utility, cost-benefit and cost-minimization analysis for a decision.
- Costing: you identify, measure and value resources from the payer's and society's perspective.
- Outcome Measurement: you derive QALYs from utility values and DALYs from burden data.
- Decision Modeling: you build decision trees and Markov models that reflect the clinical pathway.
- Uncertainty Analysis: you run one-way, scenario and probabilistic sensitivity analysis and read the results.
- Appraisal Reporting: you present ICERs, acceptability curves and budget impact to decision committees.

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What You Will Be Able to Do

By the end of the course you will be able to:

- From a clinical question, define the population, comparator, perspective and time horizon of an evaluation.
- Given price lists and resource use data, build a costed pathway for each option.
- Using EQ-5D utility values, calculate QALYs gained and discount them correctly.
- From transition probabilities, build a Markov cohort model and calculate the ICER.
- Given a willingness-to-pay threshold, interpret a cost-effectiveness plane and acceptability curve.
- Using the CHEERS reporting checklist, review a published or submitted evaluation and list its weaknesses.

Course Content

Day 1: Foundations of Economic Evaluation

- Scarcity, Opportunity Cost and Priority Setting for Care Budgets
- Types of Evaluation: Cost-Minimization, Cost-Effectiveness, Cost-Utility and Cost-Benefit
- Defining Population, Comparator, Perspective and Time Horizon
- Discounting Costs and Outcomes Over Time
- Equity Versus Efficiency in Allocation Decisions

Day 2: Costs and Outcomes

- Micro-Costing and Gross-Costing of Clinical Pathways
- Direct, Indirect and Productivity Costs by Perspective
- QALY Calculation With EQ-5D Utility Values
- DALYs for Burden of Disease and Public Health Interventions
- Willingness-to-Pay and Monetary Valuation in Cost-Benefit Analysis

Day 3: Decision Modeling

- Decision Trees for Acute and Short-Term Interventions
- Markov Cohort Models for Chronic Conditions
- Transition Probabilities From Trials and Observational Data
- Incremental Cost-Effectiveness Ratio Calculation and Dominance
- Spreadsheet Model Structure, Checks and Documentation

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Day 4: Uncertainty and Budget Impact

- One-Way and Scenario Sensitivity Analysis With Tornado Diagrams
- Probabilistic Sensitivity Analysis and Monte Carlo Simulation
- Cost-Effectiveness Planes and Acceptability Curves
- Budget Impact Analysis for Payers and Hospitals
- CHEERS Reporting Checklist for Evaluation Reports

Day 5: Practice Building the Cost-Effectiveness Appraisal Workbook

- Exercise: Decision Tree for a Vaccination Option
- Exercise: Markov Model for a Chronic Disease Medicine
- Exercise: Sensitivity Analysis and Acceptability Curve Review
- Exercise: Committee Briefing on a Listing Decision
- Completing the Cost-Effectiveness Appraisal Workbook for Your Own Question

Case Studies and Exercises

These are suggested activities.

- Case study: a hospital formulary committee weighs a new oncology drug against current care; you calculate the ICER and recommend listing or not.
- Case study: a public health department compares two screening strategies; you build a decision tree and identify the cost-effective option.
- Exercise: an insurer receives a manufacturer's model for a diabetes medicine; you review it with the CHEERS checklist and list questions back.
- Exercise: a medical device team proposes a new monitoring system; you estimate its budget impact over several years.

What You Take Back

The Cost-Effectiveness Appraisal Workbook is the spreadsheet and summary you build for one of your own funding questions during the course. In your first month back, you use it to test a pending submission, brief your committee and set a standard format for future appraisals.

- A decision problem statement and model structure.
- Costing and QALY sheets with sources.
- A decision tree or Markov model with ICER results.
- Sensitivity analysis, budget impact and a one-page summary.

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Quick Answers FAQ

What should I know before health economic evaluation training?

You should already work with clinical, cost or utilization data and be comfortable with spreadsheets and basic statistics such as means and probabilities. No economics degree is needed; the methods are taught step by step.

How does health economic evaluation training differ from a broad economics and policy course?

It concentrates on one method set: costing, outcome measurement, modeling and sensitivity analysis for funding decisions. Broader courses cover financing, insurance design, reform and system performance over a longer period.

What is an ICER in cost-effectiveness analysis?

The incremental cost-effectiveness ratio is the extra cost of a new option divided by the extra benefit it gives, often per QALY gained. Decision makers compare it with a willingness-to-pay threshold to judge value for money.

What do I take back from the Health Economic Evaluation and Cost-Effectiveness Course?

You take back the Cost-Effectiveness Appraisal Workbook for one of your questions: a model structure, costing and QALY sheets, a decision tree or Markov model with ICERs, and sensitivity and budget impact results.

For Your Manager

After the course, the team member can design an economic evaluation, cost interventions, calculate QALYs, build decision tree and Markov models and test results with sensitivity analysis. They return with a Cost-Effectiveness Appraisal Workbook, first used to review a pending funding submission and to brief the decision committee.