



OPERATIONAL RESEARCH SPECIALIST

MODULE ONE KNOWING THE SELF AND KEY PERSONALITY PREFERENCES

- The role of the employer, provider and apprentice
- Describing 'the self' and characteristics of personality
- Defining the 'inner game'

MODULE TWO INTRODUCTION TO OPERATIONAL RESEARCH SYSTEMS, PEOPLE & COMPLEXITY

- Defining systems
- Chaos theory and its implications
- Relationship building approaches
- The impact of politics, emotion, and rationality on a complex problem
- Evidence based decision making

MODULE THREE PROBLEM STRUCTURING METHODS

- A systems view of hard methods & operational research processes
- Identifying the different elements of the problem
- Tools and methods that could provide a solution to the problem
- Apply the solution in the context of the business problem

MODULE FOUR STAKEHOLDERS AND ASSUMPTIONS

- Stakeholder management tools
- Engaging stakeholders in group activities
- Uncovering hidden and unstated assumptions

MODULE FIVE INTRODUCTION TO OPTIMISATION

- Linear programming
- Simplex method and duality
- Markov chains
- Queueing theory and birth and death processes
- Inventory models

MODULE SIX INFORMATION AND EVIDENCE

- Applying different types of evidence to decision making
- Ways of remaining open-minded
- Know and apply MCDA

MODULE SEVEN MODELLING AND SIMULATION

- Describing and utilising modelling
- Building simple models
- Key limitations of modelling

MODULE EIGHT MODELLING AND SIMULATION LAB

- Lab standalone (5hrs)

MODULE NINE TOOLS, METHODS, TECHNIQUES AND DATA ANALYSIS

- Overview of popular problem structuring methods
- Systems Dynamics, Basic Python & Advanced Spreadsheet Concepts
- Evaluating and Synthesising Data
- Operational Research techniques & methods, their strengths and weaknesses and how they are used in practice

MODULE TEN REFLECTIVE PRACTICE & PORTFOLIO OF EVIDENCE

- Using research in operational analysis to develop a strong portfolio of evidence
- Techniques for managing and appraising personal and professional development
- Advanced report writing techniques

MODULE ELEVEN LEADERSHIP IN OPERATIONAL RESEARCH

- Leadership styles and when they can be used
- Applying leadership theory to a conflict

MODULE TWELVE QUALITY ASSURANCE OF ANALYTICAL PRODUCTS

- Managing and using data in accordance with relevant legislation, organisational principles, and governance
- How to draw on research and expertise to improve the robustness of your analytical approach

GATEWAY READINESS AND END POINT ASSESSMENT

PREPARING TO FINISH

- Mock End Point Assessment
- Evidence Portfolio quality review

END POINT ASSESSMENT

- Work-based Project Report with Presentation
- Professional discussion underpinned by Portfolio
- Knowledge Test

