

Workshop on Ergonomics and Human Factors in Healthcare

26. Januar 2027 - 28. Januar 2027

Loughborough University

Wissenschaftliches Programm

ERGONOMICS AND HUMAN FACTORS
Three-Day Programme

Loughborough University
26-28 January 2027

TUESDAY 26 JANUARY 2027

09:30 – 10:00

Welcome to Loughborough

Presenter: Prof Mike Fray

Welcome and introduction to the programme.

10:00 – 11:00

Introduction to Ergonomics

Presenter: Prof Simon Hodder

An introduction to the focus and philosophy of ergonomics and human factors, including the science, principles and approaches underpinning the discipline.

11:30 – 13:00

Cognitive Ergonomics

Presenter: Prof Andrew Morris

When people are treated in radiotherapy, they need to engage with the process and system. This is a cognitive interaction as well as a physical one. This session will explore that interaction.

13:00 – 14:00

Lunch

14:00 – 15:00

Task Analysis: Practical Activity for HTA

Presenters: Prof Mike Fray & Prof Simon Hodder

One of the core skills in ergonomics and human factors is developing a full understanding of processes through task analysis. This skill can be used to formally evaluate Work as Imagined (WAI) against Work as Done (WAD).

15:30 – 16:30

Human Movement: Posture, Position and Human Force

Presenter: Prof Mike Fray

Physical size interacts with human movement in the use of spaces and equipment. This session will explore ranges and types of movement and an individual's ability to apply force for different functions.

WEDNESDAY 27 JANUARY 2027

09:30 – 11:00

Anthropometry for Equipment Design

Presenter: Prof Steve Summerskill

Including: Measuring people · Scanning people · Use of anthropometric datasets

Measuring people, understanding human size and knowing how and when to use anthropometric data are essential for inclusive design. This activity will provide an understanding of these choices and how to apply them.

11:30 – 12:30

Design Activity

Presenter: Prof Mike Fray

A design problem will be introduced to explore access and egress to treatment areas, applying the principles of human size and movement covered previously.

12:30 – 13:30

Lunch

13:30 – 14:30

Design Solutions

Presenter: Leo Cancer Care

Examples of current furniture and support equipment will be presented, demonstrating how ergonomics and human factors principles can inform design solutions.

15:00 – 16:00

AR/VR Demonstration

Presenter: Prof Gary Burnett

A hosted tour of the Digital Labs, showcasing digital opportunities including digital cadavers, virtual reality experiences and explorations of the human body.

Evening

Evening Activity – Planned Excursion

A trip to a local restaurant will be arranged and funded by the programme.

Weather permitting, an outdoor activity will also be arranged to take in a local historical landmark.

THURSDAY 28 JANUARY 2027

09:30 – 12:00

Patient Safety and Quality Improvement

Presenters: Prof Thomas Jun & Prof Mike Fray

Including: Incident Investigation · SEIPS · AcciMap Activities

Patient safety and improving service quality have received significant investment in recent years. Understanding system failure and designing improvements can be supported through systems evaluation tools such as SEIPS and AcciMap.

12:00 – 13:00

Lunch

13:00 – 14:30

User Journey Mapping Techniques

Presenter: Dr Val Mitchell

Health services are increasingly recognising that user journey mapping can support the improvement of service design. This session will introduce a rapid approach to investigating health services using appropriate journey-mapping tools.

15:00 – 16:00

User Requirements for Future Design

Presenter: Prof Mike Fray

A final closing session bringing together the different topics covered over the three days. The session will focus on needs, requirements, assistive technology and identifying the best solution to support the application of ergonomics and human factors.