Connected and Autonomous Vehicles: Human Factors and Human-Machine Interface

8.5 Hour Course

Course Introduction

This course introduces the key subjects, disciplines and science used by Human Factors (HF) specialists, focusing on how it can be applied to the development of Connected and Autonomous Vehicles (CAVs).

Gain a high-level understanding of the Human Factors domain and identify if and when it is appropriate to bring in the correct expertise to support the engineering development process.

The course goes into detail to help learners understand the sub-disciplines before moving onto the tools and methods that can be applied at different stages of development of CAV features, products or services.

Learning Outcomes

- Achieve a baseline understanding of the core disciplines and subject areas of Human Factors.
- Understand the inter-relationships between the sub-disciplines within Human Factors.
- Understand how Human Factors can influence design choices.
- Understand the methodologies that should be used to deliver human-centred CAV products and services.
Expert multidisciplinary e-courses for engineers at all career stages

**Course Units**
- Unit 1: Introduction & Overview of Human Factors (HF)
- Unit 2: Usability and User Experience (UX)
- Unit 3: Research Methods
- Unit 4: Design & Evaluation Methods
- Unit 5: Trust & Acceptance
- Unit 6: Workload, Distraction and Human Error
- Unit 7: Anthropometry
- Unit 8: Sensory Capabilities
- Unit 9: Assessment

**About the IET Academy**
The IET Academy is an e-learning solution to meet the needs of companies training and development objectives, courses are tailored for engineers at all career levels providing a unique and engaging learning experience through a mix of rich media and interactive course content. Allowing learners to learn at their own convenient pace, monitor their progress and set up personalised dashboards to track their development as they learn.

The Institution of Engineering and Technology offers topics covering a broad range of technical and professional areas from power systems and mobile communications to management and leadership, all provided in partnership with expert academics and industry organisations.

**Trusted content**
The course content from the IET Academy is created by expert academic and industry organisations, who are all leaders in their field, ensuring learners develop the highly specialist skills they need to thrive within their business.

**In depth-learning**
The IET Academy courses range up to 30 hours in full courses and can be studied in whole or bite-size units allowing companies and individuals to invest in the most suitable training programmes for them.

**Who should learn?**
This course is for anyone at any level interested in how the human integrates as part of the Connected and Autonomous System. The course will also be of interest for those that are keen to understand more about human capabilities and challenges in the development of Connected Autonomous Vehicles and user interfaces.

**Other engineering courses**
- An Introduction to the Connected and Autonomous Vehicles Landscape
- Connected and Autonomous Vehicles: Sensors and Sensor Fusion
- Connected and Autonomous Vehicles: Connectivity
- Connected and Autonomous Vehicles: Cybersecurity
- Connected and Autonomous Vehicles: Computer Vision and AI

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