Analysis and ergonomics of software HMIs

★★★★★

DPIC-19 **2 Days (14 Hours)**

Description

This training will introduce you to the principles of HMI ergonomics and will introduce you to good practices for designing and improving their design. Classic and iterative software development approaches will be understood.

Who is this training for ?

For whom

Anyone in the field of IT directly or indirectly concerned by the quality of Human-Machine interfaces.

Prerequisites

Aucune

Training objectives

- Understand the purpose and principles of software ergonomics Discover the standards and rules of ergonomics in several areas Critically analyze an interface and propose recommendations to improve its usability Model the user profiles of an application Create the design and dynamics of a user interface

Training program

Introduction : qu'est-ce que l'ergonomie ?

- Definition of ergonomics.
- Why do we need ergonomists? The role of ergonomics.
- Ergonomics and innovation .
- Ergonomics at the intersection of several disciplines.
- Cognitive psychology.
- Human processing of information.

L'ergonomie dans le cycle de développement

- The V-shaped design cycle.
- Types of intervention, design or correction.
- The return on investment of ergonomics.
- Ergonomics in depth.
- Design and structuring.
- Panorama of the different ergonomics methods.
- Surface ergonomics, presentation, comfort.
- ISO 9241 usability standards.
- Ergonomics in the context of Agile and iterative methods.
- Scenario Familiarization with ergonomics.
- Audit of different HMIs presenting ergonomic problems.
- Observation and identification by trainees of points for improvement.

Design centré utilisateurs et analyse experte des logiciels

- How to present information on the screen? Visual organization.
- Human learning.
- Gestalt laws.
- Readability of criteria.
- Colors.
- Using images and icons.
- Managing the display and resizing of windows.
- The menus, Widgets, shortcuts.
- Man-machine dialogues.
- Grice's principles.
- Content, semantic aspects.
- Maxims of Nielsen.
- Practical work Based on an application and a list of functionalities, design of an interface.
- Description of the kinematics actions (on paper or using modeling software).

L'analyse heuristique des logiciels

- Heuristic analysis methodology.
- The different categories of HMI analysis criteria (control, User Experience, error management, help.
-) .
- Review of the different criteria using examples.
- Principles of human cognitive functioning and user-centered design.
- Time management.
- Concept of affordance.
- User modeling (visual perception, cognitive, physical aspect.
-).
- The concept of mapping.
- Practical work Application of the proposed HMI analysis grids.
- Proposed recommendations for improving ergonomics.