

HFS376 Human Factors in Defence and Security

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

Human Factors is key in enabling an efficient fighting force and in defending the security of a country. The defence and security sector are the largest employee of human factors around the world. The role of the modern armed and security forces has changed significantly over the years, having to fulfil a wider ranging task, engaging in extended technological-led combats and facing constant threats at home. Human factors considerations are important in the design and evaluation of defence and security systems that enhances the performance of the fighting forces. Engaging the principle of user-centred design, the course takes the students from understanding the strengths and limitation of the physical and cognitive human, developing metrics for assessing human performance, to workspace, environmental and sociotechnical system design for developing effective forces for defence and security.

Topics:

- Physical and Cognitive Human Factors
- Human Factors Design and Methods
- Workstation and Workspace Design for Military and Security Operations
- Cognitive Engineering and Performance for Military and Security Operations
- Behavioural and Organisation Human Factors
- Performance under Stress
- Team Performance and Crew Resource Management
- Safety and Risk Management for Defence and Security Operations
- Designing Soldier Systems
- Defence Training and Simulation
- Command and Control Effectiveness
- Case Studies in Human Performance and Technological Integration for the Future Force

Learning Outcome:

- Discuss physical and cognitive human capabilities and limitations
- Explain human factors methods for system design and evaluation
- Describe human performance concerns in military and security systems
- Illustrate safety and risk management issues in defence and security operations
- Examine human factors principles in the design and evaluation of soldier systems and defence training
- Propose effective solutions for defence and security system design

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	QUIZ 1	10

Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	20
Overall Examinable Components	ECA	70
Total		100