

HFS201 Workplace Evaluation and Design

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY SEMESTER

Synopsis:

An important learning outcome of the HFS/HFSY programme is to be able to demonstrate knowledge of work design and process improvement concepts and techniques. This course fulfils this objective by teaching students how to apply knowledge of anatomy, physiology and biomechanics in assessing and designing jobs and workplaces to fit the operators' needs and requirements. Students will conduct a workstation analysis to help them better understand how various factors such as work postures and job requirements contribute to occupational risks. Students will be taught how to redesign workstations to alleviate repetitive motion injuries. Principles of workstation design will be covered and these principles are applied not only to computer workstations but all other kinds of workstations. Manual materials handling guidelines are dealt with as well as designing for other types of population such the elderly, children and people with physical disabilities.

Topics:

- Anthropometry in Workstation Design
- General Principles of Workspace Design
- Manual Materials Handling
- Musculoskeletal Disorders
- Office Ergonomics
- Designing for Special Populations

Textbooks:

Karl Kroemer: Ergonomics: How to Design for Ease and Efficiency 3rd Academic Press
ISBN-13: 9780128132968

Learning Outcome:

- Describe human physical capabilities and limitations and its relevance to workplace design.
- Explain health problems that may arise due to workspace design.
- Illustrate how workspaces and solutions can be evaluated and improved.
- Apply appropriate tools and methods for data collection to evaluate and redesign workplaces (including anthropometry).
- Examine a workspace using human factors principles.
- Discuss improvements to workstations utilising human factors principles.

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	QUIZ 1	10
	GROUP BASED ASSIGNMENT 1	20
Overall Examinable Components	Written Exam	70
Total		100