

Ergonomics & Space Planning

Semester: 2 (Spring)

Stage: 2

Number of Credits: 4 semester credits/6 quarter units

Prerequisites	Project III, Design Technology II
Assessment weighting	100% continuous assessment
Element	Design
Supports stage learning outcomes	<ul style="list-style-type: none">• Integrate conceptual, contextual, ethical and material considerations in the design and realisation of space and form.• Communicate concepts, ideas and proposals to a high degree of visual and technical expertise in terms of drawing - freehand sketching, architectural drawings and computer-generated imagery.• Demonstrate and apply knowledge of structural, technological and constructional principles, the properties and meanings of materials and their influence on design decisions.• To organise, manage and operate interior architectural projects within the regulatory frameworks and systems related to design, architecture and construction.• Research and critically appraise the built environment in terms of its aesthetic, cultural, social, historical and political context.

Module aims	<p>The primary aim of the module is to:</p> <ul style="list-style-type: none">• Assist students to develop competence in space planning <p>The secondary aim is to:</p> <ul style="list-style-type: none">• Support the course and stage learning outcomes specifically with reference to Design (Project Work), Technology and Drawing.
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Module learning outcomes

On completion of this subject students will be able to:

- Analyse, design and evaluate layouts in planning of space.
- Apply an ergonomic approach to space design and planning
- Work with an engineer in order to specify electrical and mechanical services for interiors

- Integrate and apply building technology in space planning
- Specify materials in relation to their strength and limitations and also in relation to their ecological and environmental impact on space planning

Syllabus :

Space planning

Introduction to space planning
 Systematic approach to space planning; circulation, services and function,
 Social, physical and psychological factors in special design
 Sustainable interior architecture; modular planning systems; modular partition structures;
 Building accessibility, access audit and design for all.
 The design response to new work style; commercial; corporate; retail and leisure interiors
 Architectural graphics and branding

Planning Rooms

Historical and cultural perspective; domestic and commercial interiors; suitability; scale;
 proportion and balance;

Ergonomics

Introduction to anthropometrics and ergonomics
 Man/machine system design, user behaviour
 Ergonomic approach to space design; for whom the interior is designed?
 Factors affecting human performance: illumination, glare, heating, humidity, acoustics, colour;
 definition of comfort
 Sick building syndrome

Teaching/learning methodology:

The subject will be taught using interactive seminars, lectures, short 2D and 3D exercises including one-on-one tutorials. The assignments will constitute an integral part of the teaching/learning methodology. Students will be expected to maintain very regular contact with their assignment supervisor. The responsibility to arrange one-to-one tutorials rests with the student.

Method of assessment:

This module is assessed by continuous assessment. The formative assessments will take the form of class tests, assignments and research presentations that involve visual presentation material. The summative assignment is conducted by means of portfolio/process-folio appraisal

Recommended reading

Architectural Acoustics	Ando, Y.	Mcxgraw-Hill Com. Inc.	1996
Hotels and Lobbies	Berens, C.	Mcxgraw-Hill Com. Inc.	1996
New Metric Handbook	Lesley Fairmeather	Butterworths	1992
Hotels and Health-	Duff, F	Architectural Press	1990

Care Facilities			
The new office	Gay,K	Tallor & Francis	1997
Ergonomics: Product and place to fit People			