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| Module title | Computer Aided Design |
| Semester (semester1/semester2 if applicable) | Semester 2 |
| Module credit number of units | 5 ECTS |
| Assessment | 100% Continuous Assessment |

Module aims and objectives

The objectives are to enable the learner to develop skill in the use of selected software through experimenting with software through the use of montages, layout and other presentation skills. The objectives are also to develop the learners understanding of graphic design, the use of colour, type, imagery and layout. Continuing from the Interior Spatial Projects modules learners focus and hone their design skills and gain practical experience in desktop publishing and illustration packages. A second objective of the module is to develop the learners' skill in the use of design principals of design and layout for print communicating design ideas. This module also aims to enable the learner to develop skill in the use of CAD software.

On successful completion of this module, the learner will be able to:

1. Format 2D and 3D design project drawing and layout for print.
2. Use and industry-current software packages to draw detailed 2D and 3D design.
3. Combine work in 2D, 3D and Photoshop to illustrate design

Module content

| CLASS PLAN/ MODULE CURRICULUM | | |
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| Semester 1 / Week no | Topic No | Topic Name |
| 1.1 | 1 | Introduction to Module and Assignments Module Content: Brief review of Adobe Creative Cloud Photoshop and Intro to 2D CAD and Sketch Up. Intro to 2D CAD <ul style="list-style-type: none"> • Introduction to Cad Environment & Default Settings. • Panning, Zooming & Crossing windows • Simple Geometry • Paper / Model Space Introduction to Printing |
| 1.2 | 2 | 2D CAD <ul style="list-style-type: none"> • Snapping & Coordinates • Fillet & Chamfer • Moving & Scaling • Blocks |
| 1.3 | 2 | 2D CAD <ul style="list-style-type: none"> • Scale and Viewports |

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| | | <ul style="list-style-type: none"> • Draw up simple construction detail and show within building (1:100) expanded in context (1:20) and in detail (1:5) Adding detail & Depth to 2D drawings |
| 1.4 | 2 | 2D CAD <ul style="list-style-type: none"> • Text & Dimensions • Hatching • Line weights & Plot styles • Layouts and drawing conventions. Documenting Project Stages, Survey, Concept, Sketch Design |
| 1.5 | 2 | Adobe Creative Cloud Photoshop. <ul style="list-style-type: none"> • Brief review of Adobe Creative Cloud Photoshop Tools • Import 2D CAD Plans & Render • Render 2D CAD Elevation, Create Photoshop Layout with guides & Text Enhancing CAD drawings in Photoshop |
| 1.6 | 3 | Intro to Sketch Up <ul style="list-style-type: none"> • Interface and Navigation • Line & Shape Tools • 3D Line Drawing vs Push Pull Inferences |
| 1.7 | 3 | Sketch Up <ul style="list-style-type: none"> • Sketchup Groups & Components • Creating a bespoke Sketch Up Furniture Model |
| 1.8 | 3 | Sketch Up <ul style="list-style-type: none"> • Create and Animate Exploded Axonometric • Complex Components Windows |
| 1.9 | 3 | Sketch Up Pitch, Barrell, Atrium Roofs Windows |
| 1.10 | 3 | Sketch Up <ul style="list-style-type: none"> • Creating bespoke Style Settings • Materials & Scenes Windows Sections |
| 1.11 | 4 | Sketch Up <ul style="list-style-type: none"> • Sections • Dimensions Labels and Text |
| 1.12 | n/a | Presentation Layouts |

Reading lists and other information resources

Recommended Reading:

- CADArtifex. 2016. AutoCAD 2017: A Power Guide for Beginners and Intermediate, 2nd Edition, CreateSpace Independent Publishing Platform
- Cline, L. 2014. SketchUp for Interior Design: 3D Visualizing, Designing, and Space Planning, 1st Edition, Wiley

Secondary Reading

- Fane. B. 2016. AutoCAD For Dummies, 17th Edition, For Dummies
- Chopra. A. And Huehls. R. 2017. SketchUp For Dummies (For Dummies (Computer/Tech)) 1st Edition, For Dummies
- Obermeier. B. And Ted Padova. T. 2016. Photoshop Elements 15 For Dummies 1st Edition, For Dummies
- Onstott. S. 2010. Enhancing Architectural Drawings and Models with Photoshop, 2nd Edition, Sybex
- Tondreau. B. 2011. Layout Essentials: 100 Design Principles for Using Grids (Design Essentials) 1st Edition, Rockport Publishers
- Ching, F. D.K. 2015. Architectural graphics 6th Edition. Wiley