

**CAD IV**

Semester: 2 (Spring)

Stage: 3

Number of Credits: 4 semester credits/6 quarter units

<b>Prerequisites</b>	CAD III
<b>Assessment weighting</b>	100% continuous assessment
<b>Element</b>	Drawing, Design
<b>Supports stage and course learning outcomes</b>	<ul style="list-style-type: none"> <li>• Consolidate conceptual, contextual, ethical and material considerations in the design and realisation of space and form.</li> <li>• 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.</li> </ul>

<b>Module aims</b>	<p>The primary aims of the module are to:</p> <ul style="list-style-type: none"> <li>• Achieve a very good standard of 3D computer-aided design.</li> <li>• Build up students' knowledge and expertise in Sketch-up and Viz 4 and integrates it with knowledge and skills acquired in earlier modules. This is an essential prerequisite in entering employment.</li> <li>• Support work on the major project</li> </ul> <p>The secondary aim is to:</p> <ul style="list-style-type: none"> <li>• Support the course and stage learning outcomes specifically with reference to the Design (Project Work), Technology and Drawing.</li> </ul>
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**Module learning outcomes**

On completion of this subject students will be able to:

- Use 3D CAD software to construct complex 3D interiors.
- Light and render interiors to a high degree of expertise achieve an accurate and aesthetically pleasing visualization of a proposed building.
- Integrate use of Word, PowerPoint, Photoshop, AutoCAD, Sketch-Up and Viz. 4.
- Utilise fully the CAD skills and knowledge in project work.

**Syllabus content****Syllabus:**

**Use of Sketch-Up**

Constructing complex 3D computer models using this modeling programme.  
Experimentation with alternative designs using 3D models.

**Use of Viz.4**

Creating complex computer visualizations of building interiors. Importing CAD 3D models, applying materials to surfaces, alter parameters of materials, lighting analysis and rendering.

**Integrating Photoshop and other packages**

Advanced research and presentation techniques using internet research, Word, Photoshop and other packages.

**Teaching/learning methodology:**

Students will be taught in interactive workshops in a specialised computer lab. Each session will incorporate a tutor-led demonstration of software applications. This demonstration will be pre-recorded and will be made available for students on CD for reference and use. In order to achieve the learning outcomes, each session will also incorporate a practical session where students learn by experimenting with different media.

Problem-based learning will also be used as a teaching methodology. Both group and one-to-one discussions will be encouraged. This module interrelates with other year modules in that students can scan and manipulate images of **Project Work**. Assignments are an integral part of the teaching 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**

AutoCad in a Nutshell	Dorothy Kent	O’Rielly	2000
The ABCs of Architectural and Interior Design Drafting	Tony Cook	Prentice Hall	2001
Inside AutoCad 2000	Bill Burchard	New Riders	2000
Inside AutoCad 14	Bill Burchard	New Riders	2002
3D Modelling in AutoCad	CD Rom	005.369	
Architectural Modelling and Rendering with AutoCad R14	Branco Koleravic		1998
Inside Adobe Photoshop 6	CD Rom	005.369	
The Photoshop 6 Wow Book	Linnea Dayton	Peachpitt Press	2002

**Supplementary reading**

CD Rom Tutorial and Notes	Mark McKenna	GCD	2003
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