

<b>Module Title:</b>	Modelling for user validation
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	6
<b>Module Delivered In</b>	<a href="#">2 programme(s)</a>
<b>Teaching &amp; Learning Strategies:</b>	Through the use of the modeling studio and workshop, the learners are supported in the use of physical prototypes to discover user need and validate the discovered design solutions through structured testing.
<b>Module Aim:</b>	The aim of the module is to apply a range of high fidelity and low fidelity prototyping techniques to efficiently gather feedback and more specifically validate the designs. The module also aims to train the learners in the use of computer-assisted prototyping techniques.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Design and execute needs finding and validation test plans using a mix of appropriately selected high fi and low fi modeling techniques
LO2	Design and build high fidelity functional and appearance models to validate user needs
LO3	Confidently use the CAD/CAM facilities of the modeling studio to 3D print, laser-cut, and vinyl cut components for use in 3D models with a minimum of supervision.
LO4	Perform measurements and make recordings of the performance of the prototypes in user validation testing and from this data make extrapolations, findings, and proposals for design refinements
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b> <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b> <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

## Module Content & Assessment

Indicative Content
<p><b>Selecting appropriate model</b> Utilizing information theory and technical standards the module will examine the most effective and efficient model-making techniques to discover the required information. This will examine the role of "works like", "looks like" and "feels like" models and how splitting this functionality can yield more rapid development times</p>
<p><b>Model building with a purpose</b> Building low-fi and high-fi models using the full range of techniques available to a modern design model making studio with the expressed purpose of test and validation</p>
<p><b>Utilizing the full capabilities of the rapid prototyping facilities</b> Through carefully selected case studies the learners will become comfortable with the use of 3D printers, laser cutters, vinyl cutters, and other equipment to produce advanced models which would be prohibitively difficult without these techniques.</p>
<p><b>User testing prototypes</b> n/a</p>

Assessment Breakdown	%
Project	75.00%
Practical	25.00%

No Continuous Assessment

Project				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Phase 1: Design a design validation plan utilizing a range of low-fi and high-fi prototypes and produce the prototypes to support this plan. Suitable validation case studies will be provided. Phase 2: Execute this user testing and make the appropriate measurements and extrapolate findings	1,4	50.00	n/a
Project	Design and build high fidelity functional and appearance models to validate user needs	2	25.00	End-of-Semester

Practical				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Demonstrate competence in computer-assisted model making techniques through a series of exercises using CAD/CAM and simple circuit building to generating a high-fidelity physical model	3	25.00	Week 27

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
Workload Type	Frequency	Average Weekly Learner Workload
Lecture	Every Week	4.00
Total Hours		4.00

**Module Delivered In**

Programme Code	Programme	Semester	Delivery
CW_DHPDI_B	<a href="#">Bachelor of Arts (Honours) in Product Design Innovation</a>	4	Mandatory
CW_DHIDE_D	<a href="#">Bachelor of Arts in Design</a>	4	Mandatory