MODULE **DESCRIPTOR**

MODULE TITLE	DATA DRIVEN APPLICATIONS		
MODULE CODE	TE2888 (L5)	**CREDIT VALUE**	20 CREDITS / 10 ECTS
CAMPUS	UCLAN CYPRUS		
SCHOOL	SCHOOL OF SCIENCE		

MODULE **AIMS**

- To develop students' knowledge and understanding of data-driven applications.
- To develop students' capability to create a data-driven applications and content management systems.
- To identify and understand the various programming paradigms in creating structured data driven and controlled applications for delivery on the web

MODULE **CONTENT**

In this module students will learn how data-driven websites work and build one using industry standard tools and techniques. Typical open source technologies and languages used include PHP, MySQL, Json, XML, JavaScript and Local Storage.

The module will explore dynamic data collection, storage, retrieval and manipulation in structured applications. The students will explore the various techniques and topologies of dynamic data driven web applications to understand, design, develop and implement their own applications to a specific brief.

The approach will encompass the research and analysis of existing web sites and recognition of best practice in dynamic application architecture design including a 3-tier approach to system design.

In addition to writing their own coded examples, the students will also learn to design, deploy and customise industry standard website content managements systems using the knowledge gained throughout the module.

Supported lab work will include collecting and validating data through web forms, database design and administration, dynamically manipulated data and content, server-side scripting and debugging.

INTENDED **LEARNING OUTCOMES**

On successful completion of this module a student will be able to:	
1.	Research, identify and analyse data-driven applications.
2.	Identify, use and evaluate different tools, technologies and techniques used to dynamically link data to a user interface.
3.	Design, build and critically evaluate a data-driven application considering the needs of users, clients and stakeholders.
4.	Demonstrate an understanding of the key principles and architectures in creating data driven web applications

TEACHING **METHODS**

Lectures and assessed exercises will provide students with an appropriate knowledge base. Supporting online tutorials and examples will support students' learning, by introducing the relevant programming techniques and best practice in constructing an application from them.

Students will also learn how to analysis and evaluate existing applications with a view to assessing their functionality and usability. They will also learn how to plan, document and critically evaluate their own applications in the workshop sessions.

Real world applications will be developed with the aid of open source cms software and frameworks, enabling students to translate their theoretical understanding into practical solutions.

Guest speakers will be invited to talk about their area of expertise and give guidance to the ways applications using stored data can be planned an implemented.

Completed designs will undergo formative peer review as part of the development process.

ASSESSMENT **METHODS**

This module is assessed through a portfolio and a prototype.