112-2 Full Curriculum of Da-Yeh University

Information			
Title	Game Engine Application	Serial No./ID	0471 /MDI3014
Required/Credit	Optinal /3	Time/Place	(Mon)234 /H615
Language	Chinese	Grade Type	Number
Lecturer /Full- or Part-time	/Part-time	Graduate Class	Non-graduating Class
School System /Dept /Class, Grade	Bachelor /Bachelor Program for Multimedia Digital Content /Class 1, Grade 3		
Office Hour / Place	n.a.		
Lecturer	n.a.		

Introduction

This course is designed to help students in the use of 3D game engine for developing various types of digital games. The specific goal is to let students be familiar with Unity 3D digital game production processes and techniques, integrate the game objects into Unity produced from 3dMax, Maya or iClone, and write game scripts.

Outline

1.3D digital game planning
2.Unity 3D game scene and object design
3.Unity 3D game programming
4.Unity 3D game design, integration and test

Prerequisite

Introduction to game design,Basic game programming,3dMax skill,Maya skill and iClone skill。

The Relationship Between Courses and Departmental Core Competencies and Basic Skills

- Acquire professional knowledge of multimedia digital content design
- Acquire the technologies, skills and the capability of using modern tools for practicing multimedia digital content design
- Acquire the capability of integrating multimedia digital content knowledge and technologies
- Acquire the capability of finding out, analyzing and solving complex interdisciplinary multimedia design problems
  Acquire the capability of managing project, communicating each other, respecting different viewpoints and cooperating within the team
  Acquire the capability of lifetime learning。
- Acquire the capability of collecting, interpreting and analyzing global multimedia industry trends, and participating in multimedia practical design。

Acquire professional working ethics and society responsibility

- Acquire the humanities and arts accomplishment, and the capability of creative thinking and innovative design。

Teaching Plan						
Core Capability	Weight(%)【A】	Ability index(Performance Indicators)	Teaching Methods	Assessment and Weight	Core Competency Learning Outcomes【B】	Final Exam Grades【C=B*A】
Acquire professional knowledge of multimedia digital content design	30	Cultivate the capability of realizing multimedia digital content theory。 Cultivate the capability of being familiar with multimedia digital content knowledge。 Cultivate the capability of being possessed of multimedia digital content professional knowledge, including animation, comic, game design, and so on。 Cultivate the capability of being possessed of multimedia digital content design quality and accomplishment, including cultural creativity, art, esthetics, and so on。	Practical Operation (Experiment, Machine Operation Group Discussion Lecturing Group Work	Product Manufacturing: 20% Final Exam: 20% Midterm Exam: 20% Group Report: 20% Assessment on Teamwork: 20%	Total: 100	30
Acquire the technologies, skills and the capability of using modern tools for practicing multimedia digital content design	25	Cultivate the capability of being possessed of and applying multimedia digital content professional design technologies and skills。 Cultivate the capability of implementing multimedia digital content system。 Cultivate the capability of using modern multimedia software and hardware tools。	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation Group Work	Group Report: 20% Midterm Exam: 20% Final Exam: 20% Product Manufacturing: 20% Assessment on Teamwork: 20%	Total: 100	25

Acquire the capability of integrating multimedia digital content knowledge and technologies	15	Cultivate the capability of integrating theoretical knowledge and practical technology。 Cultivate the capability of integrating visual communication, information technology and content management knowledge。	Practical Operation (Experiment, Machine Operation Group Discussion Lecturing Group Work	Product Manufacturing: 20% Final Exam: 20% Midterm Exam: 20% Group Report: 20% Assessment on Teamwork: 20%	Total: 100	15
Acquire the capability of finding out, analyzing and solving complex interdisciplinary multimedia design problems	10	Cultivate the capability of exploring complex multimedia design problems。 Cultivate the capability of solving and practicing complex multimedia design systems。 Cultivate the capability of analyzing and organizing complex multimedia design problems。	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation Group Work	Midterm Exam: 20% Group Report: 20% Final Exam: 20% Product Manufacturing: 20% Assessment on Teamwork: 20%	Total: 100	10
Acquire the humanities and arts accomplishment, and the capability of creative thinking and innovative design 。	15	Cultivate the humanities and arts accomplishment 。 Cultivate the capability of creative thinking。 Cultivate the capability of innovative design。	Lecturing Group Discussion Group Work Practical Operation (Experiment, Machine Operation	Midterm Exam: 20% Group Report: 20% Final Exam: 20% Assessment on Teamwork: 20% Product Manufacturing: 20%	Total: 100	15
Acquire the capability of collecting, interpreting and analyzing global multimedia industry trends, and participating in multimedia practical design。	5	Cultivate the capability of realizing the global industrial issues of multimedia digital content。 Cultivate the capability of understanding the effects of multimedia design to industries, societies, and worldwide。 Cultivate working proficiency in career of multimedia digital content。 Cultivate the capability of great foresight and	Lecturing Practical Operation (Experiment, Machine Operation Group Discussion Group Work	Group Report: 20% Midterm Exam: 20% Product Manufacturing: 20% Final Exam: 20% Assessment on Teamwork: 20%	Total: 100	5

Grade Auditing

Midterm Exam: 20%
Final Exam: 20%
Assessment on Teamwork: 20%
Product Manufacturing: 20%
Group Report: 20%

Book Type (Respect intellectual property rights. Please use official textbooks and do not illegally photocopy others' works.)

Book Type	Book name	Author
Reference Books	Unity 3D遊戲設計實戰	邱勇標

Lesson Plan

Weeks	Content	Teaching Methods
1	Curriculum planning and Teaching Description & Intellectual Property Protection (use legitimate textbooks only) & Traffic safety Propaganda	Lecturing
2	Game Engine Introduction	Lecturing、 Practical Operation (Experiment, Machine Operation
3	3D game production practice	Lecturing、 Practical Operation (Experiment, Machine Operation
4	game plan	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
5	Object Import and Arrangement	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
6	property setting	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
7	control scripting	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
8	Level Design and Implementation (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work

9	Report	Lecturing、 Group Discussion、 Group Work
10	Level Design and Implementation (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
11	System Setup and Implementation (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
12	System Setup and Implementation (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
13	Interface setting and implementation (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
14	Interface setting and implementation (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
15	Export and publish	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
16	Testing and debugging	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation 、 Group Work
17	Self-Learning Day	Self-Learning Day
18	Works Share	Lecturing、 Group Discussion、 Group Work