

“Learning in Virtual Worlds”



**Graduate Summer Class
2012**

**George Mason University
College of Education and Human
Development
Learning Technologies Division
EDIT 772**

Karen Cooper, Ph.D.

kcoope12@gmu.edu

August 1, 2012



Course Offering

Teaching, Learning and Education

- Virtual World Agnostic
- Pedagogical Value
 - How can we ensure that learning occurs?
- Pedagogical Design
 - Which learning theories and instructional designs are good candidates for virtual worlds?
- Synchronous, distributed classes
- Meet In-World Weekly
 - Virtual Office Hours
- Class Time
 - Q&A, Topic, Field Trip, Discussion, Assignment



Instructional Goals

You will learn to navigate, build, and evaluate virtual worlds and design to their practical, applied and instructional potential.

Your terminal objective is to demonstrate how and when to recommend a virtual world to any audience with qualified value relating to effectiveness, quality, cost, and performance.



Learner Outcomes / Course Objectives

This course is designed to enable students to:

1. **Conceptualize, design, and instruct** a virtual world educational course.
2. **Develop virtual world skills** in navigation, camera controls, inventory management, 3D object manipulation, content sharing and communication.
3. **Evaluate a virtual world culture** and the effect it has on education, research and social practices in a global environment.
4. **Identify and critically evaluate** the strategy and tactics needed to plan, conduct and leverage virtual education and training, collaboration, research, and virtual seminars.
5. **Understand best practices** for designing instruction in a virtual world.
6. **Locate educational content**, content experts and communities of practice in 3D virtual spaces.
7. **Examine the human element** within virtual worlds including the benefits and consequences of virtual identity, authentication, engagement, experience and perception, as well as social filters and barriers.
8. **Identify and discuss** the social, interpersonal, cultural, instructional, technical implications of virtual worlds.
9. **Research the relevant literature** in the field and investigate the current best practices as documented in the literature.



Instructional Approach

The course will emphasize a **critical thinking approach** to education. A critical thinking approach assumes that the student and not the instructor create knowledge.

Students must **actively question** and reflect on the material, vice passively absorb it. Therefore, classes will use a discussion format with extensive student involvement.

The class activities will also engage the students to actively **create new knowledge through direct experience**.

The student must think critically, not just memorize facts. **Active participation** and cooperation is expected during class time, with online discussions and in-world activities.



Module 1 – Introduction & Navigation

Pioneering Technology

- Emergency Backup

Orientation

- Movement
- Communication / Etiquette ? :)
- Environmental Settings

Assignment

- Personalize avatar

Display Name
Txt Chat - individually (IM)
Class Group - EDIT772
Camera controls
Class picture
Marketplace

Profile
Local Audio / Voice
Adding Friends
Appearance
Teleporting
Big Map

Local Chat
Conference/Local Calls
Inventory
Outfit
How-To videos
Green Dots



Module 2 – Concepts and Constructs

Constructs

- 3 D Space
- Synchronous, Real-time
- Commodity hardware

Concepts

- Not a Game
- Supplement, not Replacement

When to Use / When not to Use

- Goals first
- Sweet spot is the intersection

Temporary Suspension of Disbelief



Module 3 – Purposes

General

- Conferencing & Collaboration
- Rapid Prototyping & Design
- Training & Education
- Skill building & Practice
- Data Visualization & Analysis
- Showcasing & Outreach
- Socializing
- eCommerce, eBusiness

Educational

- Role Play
- Defying Time, Space, Physics
- Fail Safe
- Practice, Visualize, Manipulate



Module 4 – More on Tools

Educational Use of Tools

- Coffee cup
- Animations
 - Three kinds
- Embedded 2D Web
 - Streaming videos
 - Webpages

Interaction

- Class Sweet Spot



Module 5 – Building

Goal

- Conversationally Proficient

Concepts

- Prim vs Mesh
- Software and Content Development Kits
 - internal and external tools
- Importing, Exporting

Sandbox

- Practice building



Module 6 – The Human Element

The People

- The Homeless Professor
 - Interaction and treatment by others
 - Based on appearance
- Psychology work
 - Personal space

The Learner

- Identity
- Presence
- Co-Presence

Temporary Suspension of Disbelief



Module 7 – Academic Work

Best Practices in Instructional Design

- Empirical Research
- Alignment of Goals with Platform

Resource List

- In-World Groups
- Associations
- Journal Articles
- Books
- Universities



Module 8 – Other Virtual Worlds

Choice Depends on:

- Goals
- Fidelity Requirements
- Audience
- Security
- Experience

Taxonomy of Other Virtual Worlds

- Core Purpose
- Accessibility
- Architecture
- Development
- Business Model
- Scalability



Final Project

Design and Document a VW Learning Activity

- Goals, Objectives, Activity
- Tasks, Resources, Assessment
- Lesson Plan, PowerPoint, Story Board, or Project Plan (Word Document)

Class Evaluation Metrics

- Evaluation Criteria
 - Online discussions = 20%
 - In-world class discussions = 20%
 - Class Blog (Portfolio) = 30%
 - Final Project = 30%



Final Project - Examples

Childproofing a Home

- Learning by Doing
- From the eyes of a baby
- Shopping for supplies

Residential Property Appraiser

- Challenge-based learning
- Good and bad houses
- Practice taking measurements

Eye Care Expert's Island

- Procedural learning
- Filling eye glass prescription
- Practice, fail safe, timed, ordered



Final Project - Examples

National Cathedral Architecture Course

- 3D visualization
- Artifacts, history
- Timeline - experience Cathedral build

Modeling & Simulation in a Virtual Ecosystem

- Experiential learning
- Locate hazards, imbalance
- Command Center – vary settings

Virtual World Dining

- Role Play
- Etiquette, Manners, Dress
- Culture, behavior, Seating



Learning in Virtual Worlds

Questions ?