GAME PROGRAMMING 3003

OBJECTIVE

To get subsequent understanding of game design and development, which includes the processes, mechanics, issues in game design, game engine development, modeling, techniques, handling situations, and logic. At the end, the student will be in a position to create interactive games. To learn this course an exposure to 3D graphics principles and animation techniques are the prerequisite.

UNIT – I  3D GRAPHICS FOR GAME PROGRAMMING  9

Coordinate Systems, Ray Tracing, Modeling in Game Production, Vertex Processing, Rasterization, Fragment Processing and Output Merging, Illumination and Shaders, Parametric Curves and Surfaces, Shader Models, Image Texturing, Bump Mapping, Advanced Texturing, Character Animation, Physics-based Simulation

UNIT – II  GAME DESIGN PRINCIPLES  9

Character development, Story Telling, Narration, Game Balancing, Core mechanics, Principles of level design, Genres of Games, Collision Detection, Game Logic, Game AI, Path Finding

UNIT – III  GAMING ENGINE DESIGN  9

Renderers, Software Rendering, Hardware Rendering, and Controller based animation, Spatial Sorting, Level of detail, collision detection, standard objects, and physics

UNIT – IV  GAMING PLATFORMS AND FRAMEWORKS  9

Flash, DirectX, OpenGL, Java, Python, XNA with Visual Studio, Mobile Gaming for the Android, iOS, Game engines - Adventure Game Studio, DXStudio, Unity

UNIT – V  GAME DEVELOPMENT  9

Developing 2D and 3D interactive games using OpenGL, DirectX – Isometric and Tile Based Games, Puzzle games, Single Player games, Multi Player games.

TOTAL : 45

TEXT BOOKS:

REFERENCES:

6. Andy Harris, “Beginning Flash Game Programming For Dummies”, For Dummies; Updated edition, 2005.
Program 3.2 is divided into three logical sections. These are known as the interface, implementation, and program section, respectively. The interface section (delineated by @interface in the code) provides basic program-wide definitions, the implementation section (delineated by @implementation) provides the implementation of the methods, and the program section contains the main code that does something. The @interface Section. Every class in Objective-C has a single parent, or superclass, from which the class inherits. Objective-C 2.0 introduces properties, which provide an easy way to create getter and setter methods. This will also be covered in a later lesson. This post is part of the Learn Objective-C in 24 Days course. Gary Rosenzweig's ActionScript 3.0 Game Programming University shows you how to use ActionScript, the programming language behind Flash CS3 Professional. The lessons teach you all the basics of ActionScript programming through game examples, but the code can be easily adapted to non-game-oriented projects, such as web training and advertising. Written by a real-world Flash developer, this book presents you with the source code of 16 complete games and lays the foundation for you to create your own games. Dcoder is a mobile coding IDE (Compiler for mobile), where one can code and learn algorithms using programming on mobile. Tailored to enhance your coding skills, via the use of code compilation and algorithm solving. Now learn to code anytime anywhere. Choose any or all languages to work with: 1. C : learn C programming, a powerful general-purpose language. 2. C++ : GCC compiler 6.3 3. Java : best Java Programming ide, JDK 8 4. Python : learn Python 2.7 and Python 3. 5. C# : Mono Compiler 4 6. Php : Php Interpreter 7.0 7. Objective-C : GCC compiler 8. Ruby : Ruby version 1.9 9. Lua : Lua Int