Course Outline – Game Development (12 Weeks)

Course Duration: 12 Weeks
Delivery Mode: Online / In-person
Level: Beginner to Advanced

Course Overview:
This course provides a comprehensive introduction to game development, covering design, programming, and deployment. Students will learn how to create engaging, interactive games using industry-standard tools and practices.

Modules:

1. **Introduction to Game Development**
    - Overview of game engines
    - Game design principles
    - Understanding game genres
2. **Game Design & Storyboarding**
    - Concept creation
    - Level design and storyboarding
    - User experience and engagement
3. **Programming for Games**
    - Introduction to C#, Python, or Unity scripting
    - Event handling and game logic
    - Physics and animation basics
4. **2D & 3D Game Development**
    - Sprites, assets, and environments
    - Character modeling and animation
    - Lighting, camera, and scene management
5. **Audio & Visual Effects**

    - Sound design and background score
    - Particle effects, shaders, and lighting effects
6. **Testing & Deployment**
    - Game testing methodologies
    - Debugging and optimization
    - Publishing games to platforms

Learning Outcomes:

- Design and develop 2D and 3D games
- Apply programming and scripting in game development
- Create engaging game experiences for users

Assessment:

- Practical projects
- Mini-game assignments
- Final capstone project

Course Outline – Cryptocurrency & Blockchain (12 Weeks)

Course Duration: 12 Weeks
Delivery Mode: Online / In-person
Level: Beginner to Intermediate

Course Overview:
This course equips students with foundational and practical knowledge of cryptocurrency, blockchain technology, and digital assets. Students will gain skills to understand, trade, and implement blockchain-based solutions.

Modules:

1. **Introduction to Cryptocurrency & Blockchain**

- History of cryptocurrency
- Blockchain fundamentals
- Types of cryptocurrencies

2. **Cryptocurrency Mechanics**
    - Wallets and private keys
    - Transactions and mining
    - Decentralization and consensus
3. **Trading & Investment Basics**
    - Exchanges and trading platforms
    - Risk management and security
    - Market analysis techniques
4. **Blockchain Applications**
    - Smart contracts
    - DeFi (Decentralized Finance)
    - NFTs and digital assets
5. **Regulations & Security**
    - Legal landscape in the UK and globally
    - Cryptocurrency regulations
    - Cybersecurity in crypto
6. **Practical Projects & Case Studies**
    - Creating a crypto wallet
    - Simulated trading exercises
    - Blockchain implementation case study

Learning Outcomes:

- Understand blockchain and cryptocurrency concepts
- Safely manage crypto assets and wallets
- Analyze and participate in crypto markets
- Develop basic blockchain-based applications

Assessment:

- Quizzes & case studies
- Practical exercises
- Final project: Blockchain/cryptocurrency simulation