# SELF ASSESSMENT GUIDE

**Qualification:**
3D GAME ART DEVELOPMENT NC III

<table>
<thead>
<tr>
<th>Units of Competency Covered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design game program logic</td>
</tr>
<tr>
<td>• Apply object-oriented programming language skills</td>
</tr>
<tr>
<td>• Apply programming skills for in-game application</td>
</tr>
</tbody>
</table>

**Instruction:**
- Read each of the questions in the left-hand column of the chart.
- Place a check in the appropriate box opposite each question to indicate your answer.

<table>
<thead>
<tr>
<th>Can I?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

## DESIGN GAME PROGRAM LOGIC

- Formulate/design game program logic *
- Analyze game specifications
- Obtain, review and clarify design documentation
- Conceptualize game technical design
- Analyze game physics
- Identify and solve physics problems/equations based on GDD
- Apply differentiation based on GDD
- Prepare technical game documentation*
- Transform requirements to technical design document
- Illustrate program structures
- Identify and document special routines or procedures
- Identify resources for coding and testing of program
- Prepare concept arts for GUI *
- Validate technical game documentation *
- Check technical design document

## APPLY OBJECT-ORIENTED PROGRAMMING LANGUAGE SKILLS

- Identify game/project coding standards
- Apply basic language syntax and layout*
- Use and customize appropriate language syntax for sequence, selection and iteration constructs
- Apply basic object-oriented principles in the target languages*
- Implement a class that contains primitive member/instance variables
- Implement a class that contains multiple options for object construction
- Enforce a class security using encapsulation
- Implement inheritance to at least two levels of depth
- Use polymorphism via inheritance to enable easy code extension
- Debug codes*
- Use integrated development environment
- Use a program debugging techniques to detect and resolve errors
- Follow guidelines for developing maintainable code
- Use and follow internal documentation standards
- Test codes*
- Develop and conduct simple tests to confirm the coding process
- Document activities

**APPLY PROGRAMMING SKILLS FOR IN-GAME APPLICATION**

- Obtain game mechanics by analyzing the GDD and TDD
- Analyze technical design document
- Derive technical storyboard and corresponding pseudo code from GDD and TDD
- Prepare game development environment *
- Set the necessary hardware/software to code, compile and run game development tools
- Apply basic language syntax and layout
- Use and customize appropriate language syntax for sequence, selection and iteration constructs
- Write code for game application*
- Develop working prototype
- Identify game module per iteration
- Define and explain game loop
- Create and implement program code
- Use mathematical concepts and techniques in controlling and implementing game systems
- Use the style and design principles to solve common game programming problems
- Use and customize the data structures and algorithms to ensure robust and fast implementation of game systems
- Identify and apply appropriate design patterns in coming up with initial prototype
- Execute and test the game application*
- Check workability of the prototype
- Evaluate prototype based on GDD
- Apply prototype iteration based on evaluation results
- Implement iterative prototyping cycle until game final prototype is approved
- Refine/debug a system
- Assess game prototype to follow quality assurance/testing techniques
- Address and fix program errors
- Address overall game design concerns
- Optimize a game program based on project requirements

I agree to undertake assessment in the knowledge that information gathered will only be used for professional development purposes and can only be accessed by concerned assessment personnel and my manager/supervisor.

<table>
<thead>
<tr>
<th>Candidate's Name:</th>
<th>Date:</th>
</tr>
</thead>
</table>

NOTE: *Critical Aspects of Competency