**New York City College of Technology of The City University of New York**

**Department of Computer Systems Technology**

**Department of English**

# *CST 1102 Programming Narratives: Computer Animated Storytelling College Option: Interdisciplinary Liberal Arts and Sciences course*

# (3 credits, 3 hours)

**Prerequisites:** ENG 1101 English Composition I andCUNY proficiency in Mathematics.

**Instructors:**

Prof. Jacquelyn Blain Prof. Tamrah D.Cunningham

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Office Hours: Thursday from 1 p.m.– 2 p.m. Office Hours: Thursday noon – 2 p.m.

or by appointment

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**Course Description:**

In this interdisciplinary course, through the study of the structure of narrative, concepts of problem solving, and the logic of computer programming languages, students develop a narrative-driven video game prototype. Emphasis is placed on creative writing and computational thinking.

**Course Objectives:**

Upon successful completion of the course, students should be able to:

* Create a game design document
* Demonstrate an understanding of the structure of game stories.
* Exhibit an understanding of the steps required in solving a problem using a computer.
* Demonstrate understanding of flowcharting techniques to solve an algorithm.
* Program using sequencing, repetition loops, and decision statements.
* Use a range of language, formal to informal, appropriate to subject, purpose, and audience.
* Demonstrate understanding of various narrative structures.
* Install and run the IDLE Python programming environment.
* Design and implement basic Python scripts.
* Demonstrate broad problem-solving experience by referring to solutions from a problem bank covered during class.
* Write, proofread, and revise clear and logical sentences using correct spelling, conventional punctuation, correct grammar and syntax. Use varied sentence structure. Order and connect sentences and paragraphs effectively, using transitions and parallelism.
* Cite sources within the text and on a reference page using appropriate documentation format.

**Required:**

Bryant, Robert D. & Giglio, Keith. *Slay the Dragon. Writing Great Video Games.* Michael Wiese Productions. 2015

Additional readings of short narrative of various kinds are assigned (see Course Outline).

**Recommended reading (free, online)**

* Think Python, 2nd Edition by Allen B. Downey



<http://greenteapress.com/wp/think-python-2e/>

* How to Think Like a Computer Scientist: Interactive Edition

<http://interactivepython.org/runestone/static/thinkcspy/index.html>

* Algorithmic Problem Solving with Python by John B. Schneider, Shira Lynn Broschat, and Jess Dahmen.



[http://www.eecs.wsu.edu/~schneidj/swan/index.php](http://www.eecs.wsu.edu/%7Eschneidj/swan/index.php)

* How to Think Like a Computer Scientist by Peter Wentworth, Jeffrey Elkner, Allen B. Downey, and Chris Meyers

<http://www.openbookproject.net/thinkcs/python/english3e/>

* Python Bibliotheca: <http://www.openbookproject.net/pybiblio/>

**New York City College of Technology Policy on Academic Integrity:**

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

**Final Course Grade Breakdown**:

Midterm 10%

Final 10%

Problem-solving assignments 20%

Writing assignments 20%

Game design document 20%

Project 20%

**Project:** For the course project, you will develop a narrative, text based adventure game using Python 3.6. The game has to involve branching paths, a set of implemented stats and a functioning inventory system. Along with the game design document, students will have to create a flowchart of all the branching paths that the game takes.

1. Write a video game background story

2. Create settings and characters (protagonist, antagonist and side characters) for your group’s video game

3. Complete the entire story (Beginning, middle and end)

4. Map out the various branching paths the game will take

5. Create the necessary stats and inventory the game will be keeping track of

6. Implement the story in Python

**Game design document:** analysis, design, and project description.

The following are possible contents of each section of the game design document:

* Analysis: Video game narrative, target audience, delivery platform, and review of competing games.
* Design: Player characteristics, game mechanics, and challenge.
* Project Description: Video game prototype, branching path map, visual board

**Required Format for Papers:**

All papers should be typed with 12-point standard font (e.g., Times New Roman or Arial). Page margins should be 1-inch on all sides. Handwritten papers will not be accepted.

**Policy for Late Papers:**

Assignments should be handed in at the beginning of class. If an assignment is turned in late because of an emergency, the grade will decrease as follows:

**One day late**: One letter grade reduction for the assignment for each day late.

**One class late**: No credit for the assignment.

**Course Outline:**

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| **Week** | **Writing** | **Programming** | **Homework for next time** |
| **1**  **8/31** | Game Stories & Interactivity  Story/narrative: chain of cause-effect, character connection  “Three Questions”  *Dragon* *Ch.1-2* | General problem-solving methods  Intro to logical step solutions & computer problem solving | Create an algorithm of your chosen hobby |
| **2**  **9/7** | *Dragon Ch. 4*  Aristotle, structure (CLOSAT)  Jack & Jill the video game | Introduction to Python 3.6 | 10 ideas for a game world  Download Python 3.6 |
| **3**  **9/14** | *Dragon Ch. 9 (world building)*  World building using their ideas | Variables, types and data input/output | Choose a one game world and develop the protagonist |
| **4**  **9/19**  **TUES** | *Dragon Ch.5 and Ch. 8 part 1*  Character types, building characters  Hat & Shoe  Endings  How to pitch | Continuation of Variables | Pitch story idea |
| **5**  **9/28** | Pitch writing workshop  Pitch story ideas  Choose stories/groups |  | Each team member develops 2 characters (not the protagonist or antagonist) for the group story |
| **6**  **10/5** | Workshop story ideas – completing the story  Review for Mid Term | Boolean Logic  And Conditional Execution (If-Else) | Completed initial draft of story due Week 8, without branches |
| **7**  **10/12** | Midterm |  |  |
| **8**  **10/19** | *Dragon Ch. 8 part 2*  Level Design  Game Design Document | Modules/Functions  Parameters/Arguments | Read “Sound of Thunder” and do worksheet |
| **9**  **10/26** | Branching narrative  Major, minor, moderate | While Loops | Possible branches for group story |
| **10**  **11/2** | Mapping | For Loops and Lists |  |
| **11**  **11/9** | Statistics and Inventories  Game Mechanics  Immersion revisited | Strings |  |
| **12**  **11/16** | Workshop |  |  |
| **11/23** | **NO CLASS – THANKSGIVING** | | |
| **13**  **11/30** | Workshop | Workshop |  |
| **13**  **12/7** | Workshop | Workshop |  |
| **15**  **12/** | Final Exam  Play Test Session |  | Game Design Document |