



**Atlantic Technical College**  
**Game/Simulation/Animation Programming**  
**Traditional/Distance**  
**Program Syllabus**  
**2020-2021**



**Instructor Name:** Chandrakasan Iyar  
**Department Name:** Business and Informational Technology  
**Office/Classroom Location:** Building 7 Room 176  
**Phone Number:** (561) 444-8121 (Google Voice)  
**Email Address:** [chandrakasan.iyar@browardschools.com](mailto:chandrakasan.iyar@browardschools.com)

**Instructor Office Hours:**  
**M-F:** 6:45 am – 7:30 am & 2:15 – 3:45 pm  
 (appointment preferred)  
 Instructor responses to student requests will be provided within 24 hours of regular school operating hours:  
 Monday – Friday 7:00 am – 3:00 pm.

**Student Hours:**  
**Monday – Friday**  
**High School AM:** 7:30 am – 10:35 am  
**High School PM:** 11:10 am – 2:15 pm  
**Postsecondary Part-Time:** 7:30 am – 10:30 am  
**Postsecondary Full-Time:** 7:30 am – 2:15 pm  
**Lunch:** 10:35 am – 11:05 am  
**Online:** Monday, Wednesday, Thursday & Friday  
**Lab:** Mandatory Tuesday Virtual Meetings  
 Online, Part-Time or Full-Time Available

| <b>Program Name:</b><br>Game/Simulation/Animation Programming |   |              |
|---|---|--------------|
| <b>OCPs</b>   | <b>Course Names</b>                         | <b>Hours</b> |
| A   | DIG0070: Game/Simulation Designer           | 300          |
| B   | DIG0075: Game/Simulation Programmer         | 150          |
| C   | DIG0076: Game/Simulation Software Developer | 150          |

**Course Description:**  
 This program is designed to prepare students for employment in careers such as a Game/Simulation Designer, Game Programmer, and/or Game Software Developer. Students will receive practical experiences in game/simulation conceptualization, design, storyboarding, development methodologies, essential programming techniques, animation, game engine utilization, and implementation issues. Specialized programming skills involving advanced mathematical calculations are also integrated into the curriculum.

**Technical College Policy/Adult Student Attendance:**

- A student must be withdrawn after being absent for six (6) consecutive days.
- Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.
- Please refer to the Student Handbook for postsecondary students.  
<http://www.atlantictechcollege.edu/atc-student-handbook/>

**Magnet High School/Attendance Policy:**  
 A student who has had at least five unexcused absences, or absences for which the reasons are unknown, within a calendar month, or 10 unexcused absences, or absences for which the reasons are unknown, within a 90-calendar-day period, may be exhibiting a pattern of non-attendance according to (F.S.1003.26 (1) (b)) and the School Board of Broward County, Policy 5.5.

**Required Book(s) and/or Online Access:**

- CIW JavaScript Specialist Electronic Student Kit

**Provided by School:**

- Oracle Academy Access
- Unity 3D Access
- GG-Interactive Access

**Required Materials/Supplies:**

- Computer Headset with Microphone
- Pen, Pencil & Notebook

*All required books and most materials/supplies can be purchased from the ATC bookstore.  
 Stop by during operational hours for pricing, booklist and other purchasing information.*

|   |   |
|---|---|
| <p><b>Grading System:</b></p> <ul style="list-style-type: none"> <li>A 90 - 100%</li> <li>B 80 - 89%</li> <li>C 70 - 79%</li> <li>D 60 - 69%</li> <li>F 0 - 59%</li> <li>I Incomplete</li> </ul>  | <p><b>Additional Program Specific Grading Information:</b></p> <ul style="list-style-type: none"> <li>• Daily/Classwork/Homework 30%</li> <li>• Quizzes/Tests/Exams 30%</li> <li>• Projects/Presentations 30%</li> <li>• Work Habits 10%</li> </ul>                     |
| <p><b>Online Course Grading Policy:</b></p> <p>Online students' grades and attendance are based on the following:</p> <ul style="list-style-type: none"> <li>• Scheduled assignments are due each <b>Sunday by 11:59 pm</b>. Late submission of work will affect the assignment grade.</li> <li>• Students assume full responsibility for the content and integrity of submitted work. As the guiding principle of academic integrity, a student's submitted work, examinations, reports, projects, etc. must be his/her own.</li> <li>• Unless otherwise stated by the instructor, physical or digital references including books, charts, graphs, diagrams, photos, notes or calculators may not be utilized during assessments or exams. Blank scratch paper will be permitted during certain assessments.</li> <li>• Exams may include an oral or lab/skills component and final exams will be completed in-person during a lab session.</li> </ul> |   |
| <p><b>View Your Grades:</b></p> <p><b>Grades can be viewed online by following the directions below:</b></p> <ol style="list-style-type: none"> <li>1. Go to Clever SSO Website link: <a href="https://sso.browardschools.com">https://sso.browardschools.com</a> and login:       <ol style="list-style-type: none"> <li>a. Username: 10-digit student ID number</li> <li>b. Password: PMM/DD/YYYY (or your personally created password after initial login)</li> </ol> </li> <li>2. Click on the FOCUS app on your Clever opening page.<br/>(You may need to scroll-down the page to see the FOCUS app.)</li> <li>3. Enter your FOCUS username and password.</li> </ol> <p><i>NOTE:</i> If the Focus App. is not visible after logging into Clever, please navigate to the Broward Focus website directly: <a href="https://broward.focusschoolsoftware.com/focus/">https://broward.focusschoolsoftware.com/focus/</a>.</p>                           |   |
| <p><b>Classroom/Lab Rules:</b></p> <ul style="list-style-type: none"> <li>• Sign in and out DAILY.</li> <li>• Read and follow DAILY AGENDA upon arrival.</li> <li>• Follow all rules in the student and discipline code books.</li> <li>• Cell phones silent or OFF and PUT AWAY.</li> <li>• Contact instructor by 8:00 am on the same day when absent (email preferred).</li> <li>• Come to class prepared to work and be respectful of ALL class members.</li> <li>• ALL assignments submitted to instructor must reflect the student's own individual work.</li> <li>• <b>NO FOOD OR BEVERAGES IN THE LAB.</b></li> </ul>  |   |
| <p><b>Industry Certification &amp; State Credential Exam Cost:</b></p> <ul style="list-style-type: none"> <li>• CIW JavaScript Specialist- \$183.00</li> </ul> <p><i>You may qualify for certification reimbursement of your exam cost(s) upon passing. Credential fees are subject to change.</i></p>  | <p><b>Outstanding Student Recognition Information:</b></p> <p>A gold seal will be applied to a Program Completion Certificate or an Applied Technology Diploma if the student has earned a 3.5 GPA or higher in their Career and Technical Education (CTE) classes.</p> |

**Program Name: Game/Simulation/Animation Programming**

**Course Number:** DIG00700

**Course Name:** Game/Simulation Designer (300 Hours)

**Occupational Completion Point:** A

**Intended Outcomes:** ([From FL DOE Curriculum Framework](#))

Student will be able to:

- Identify commonly used art and animation production tools in the game design industry.
- Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets.
- Explain the importance of employability skill and entrepreneurship skills as it relates to game/simulation development.
- Identify tools and software commonly used in game development.
- Investigate career opportunities in the game industry.
- Demonstrate research and information fluency.
- Demonstrate an understanding of the techniques used to evaluate game mechanics, game play, flow, and game design.
- Explore the methods used to create and sustain player immersion.
- Describe the game development life cycle.
- Demonstrate the professional level of written and oral communication required in the game development industry.
- Understand the core tasks and challenges that face a video game design team.
- Demonstrate leadership and teamwork skills needed, as it relates to game/simulation development, to accomplish team goals and objectives.
- Create a working game or simulation as part of a team.
- Create a game design production plan that describes the game play, outcomes, controls, interface and artistic style of a video game.
- Categorize the different gaming genres.
- Identify popular games and identify commonality between them.
- Understand the general procedure and requirements of game design.
- Understand the general principles of storytelling for game design.
- Understand character archetypes and character design.
- Develop a game design document.
- Understand the process of creating and designing player choice and other game designer strategy considerations.
- Create and design the game flow as it relates to story and plot.
- Assess common principles and procedures in game flow design.
- Describe player challenge rule creation elements.
- Understand the use of inventory systems in game design.

**Course Number:** DIG00750

**Course Name:** Game/Simulation Programmer (150 Hours)

**Occupational Completion Point:** B

**Intended Outcomes:** ([From FL DOE Curriculum Framework](#))

Student will be able to:

- Identify functions of information processing.
- Test programs.
- Plan program design.
- Code programs.

- Perform program maintenance.
- Create and maintain documentation.
- Evaluate assigned game programming tasks.
- Implement enhanced program structures.
- Demonstrate the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance.
- Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
- Explain the importance of employability skill and entrepreneurship skills.
- Demonstrate personal money-management concepts, procedures, and strategies.

**Course Number:** DIG00760

**Course Name:** Game/Simulation Software Developer (150 Hours)

**Occupational Completion Point:** C

**Intended Outcomes:** ([From FL DOE Curriculum Framework](#))

Student will be able to:

- Identify and describe basic network terminology and network security.
- Game configuration.
- Test programs.
- Plan program design.
- Create and maintain documentation.
- Code programs.
- Demonstrate an understanding of operating systems, environments, and platforms.
- Implement enhanced program structures.
- Implement multimedia programming.
- Develop an understanding of programming techniques and concepts.