DigiPen WANIC Game Design Year 1

Class Meeting Times: Monday - Friday
7:15 a.m. - 9:45 a.m.
12:30 p.m. - 3:00 p.m.

Course high school credits: CTE (2.0), 3rd Yr Math (1.0)

Course Overview:
What makes games fun, functional, or engaging? How can we design systems to allow users the most enjoyment and the greatest payoff? How do we provide the best value for the player's investment of time and energy? This program is intended to complement the current Video Game Programming track. It is for creative-minded students who are deeply curious to understand the behavior and psychology behind games and are eager to learn the skills and methods used for designing fun and engaging interactive experiences.

Students study and apply fundamental engagement theory content and other topics, including computer science, cognitive psychology, economics, communications, and user experience. As a project-based program, students spend much time prototyping, testing, and rapidly developing game ideas.

Program Vision:
To equip students with a robust understanding of game design across analog and digital mediums, focusing on the user experience and rooted in the study of player psychology.

Program Outcomes:
By the end of the course, students will be able to:

1. Analyze and articulate the principles of game design and how they contribute to user experience.
2. Understand different game design disciplines, including systems, level, user experience, narrative, and technical design.
3. Understand and apply knowledge of player psychology and essential user experience design techniques to enhance game mechanics and engagement.
4. Design games across a variety of genres and mediums.

5. Ability to incorporate mathematical principles into game design to enhance fairness, balance, and engagement.
6. Proficiency in using probability to predict and analyze game outcomes and player choices.
7. Capability to design and refine in-game systems based on statistical analysis and simulations.
8. Prototype, playtest, and refine game designs based on iterative feedback.
9. Understand and apply the production processes for both digital and analog games.
10. Communicate and collaborate effectively within a game development team environment.

Competency-Based Approach:
DigiPen uses a competency-based approach for its educational experience, and these course policies reflect that philosophy. In a competency-based system, your progress is measured by your ability to demonstrate mastery of key skills and concepts. The following policies are designed to support your journey towards mastering these competencies.

1. **Course-work Policy:** There is no homework component; all work is done during regular class time, allowing instructors to observe and evaluate mastery of knowledge and skills. Additional in-class work time is built into the schedule to accommodate absences or a slower work pace. Please note that excessive absences will likely affect a student's ability to meet the competencies.
2. **Grading Policy:** Semester grades are determined by competency completion and quality of work. Students with **any number** of assignments marked Missing/ Incomplete/ Revision Required assignments will receive an "N" (No credit) letter grade. ***To earn a passing high school grade, students must score a Meets Competency/Complete on ALL assignments due within a given grading period.*** **"B"** or **"A"** high school letter grades are awarded based on the quality of work submitted.
3. **Quarter Check-Ins:** Prior to the end of each quarter, students with **any number** of Missing/Incomplete/Revision Required assignments and/or perform poorly on student evaluations will automatically receive an email notification home. On a case-by-case basis, students will be required to attend a Parent-Teacher conference and may receive a **"D-"** letter grade at Quarter 1 and Quarter 3 as a warning, which will become a **"N"** (No credit) letter grade at the end of the semester if pace continues.
4. **High School Transcripts**: Only final high school semester grades are submitted at the end of each semester. The WANIC office sends WANIC high school transcripts to each

student's public high school. Homeschool and private school families should reach out to the public high school that their student is registered under for the WANIC program if they want to request a copy of their official transcript.

Assignments:
You are responsible for completing and submitting all required work. Information about all assignments will be posted on the Canvas course. The work is expected to be done during your regular class time and anything you do not finish during the current class period can be resumed in class at a later date.

Each assignment is assessed based on your ability to fulfill general requirements that relate to that assignment. These requirements are often used in multiple assignments, and your overall grade is based on your ability to meet the expectations for these competencies.

Assignments are assessed into the following competency categories:

- **Missing/Incomplete:** Assignment has not been submitted correctly.
- **Revision Required/Incomplete**: Assignment has been submitted but does not meet all expectations. The student receives feedback and is required to resubmit with revisions.
- **Meets Competency [HS]/Complete**: Assignment expectations have been met at the high school level and the student is given feedback. Optional revisions may be made for a higher grade upon resubmit.
- **Refined/Complete [HS]**: Assignment submission demonstrates all expectations at a high quality for the high school level. Further improvements would require a collegiate level understanding. Optional revisions may be made for a higher grade upon resubmit.
- **Advanced/Complete [College]**: Work demonstrates a collegiate level of skill and process. The student uses higher order thinking skills to elevate the work above the high school expectations. Optional revisions may be made for a higher grade upon resubmit.
- **Mastery/Complete [College]**: Student work demonstrates highest level of competency for this course.

Assignment Resubmission:
Any assignment can be resubmitted without penalty as many times as needed within the grading period. Exceptions may be made for content that falls outside the scope of the minimum class requirements (such as college material, live events, or group work).
All resubmissions must be uploaded to Canvas before the end of each semester. Keep in mind that once the grading period is over, semester grades cannot typically be changed.

Independent Study Project:
Upon completing the required competencies, students may have time to work on an "Independent Study" project that is non-graded, which encourages students to learn for the sake of learning and further personalize their education based on their professional interests. Students choose the type of project they would like to try, and the instructor then helps students develop an individualized learning plan to achieve their project outcome.

Academic Integrity and Coursework Policy:
To maintain high academic integrity and a productive learning environment, all students must adhere to the following guidelines:

1. **Original Work Requirement**: Students are strictly prohibited from plagiarizing or utilizing any other material produced by others. This includes, but is not limited to, images, music, code, or any other form of creative work. Student work should all be original design.
2. **Generative AI Tools**: The use of generative AI tools is strictly forbidden in all aspects of coursework and assignments, unless the instructor gives explicit permission for select assignments.
3. **In-Class Completion of Assignments**: All assignments must be completed during class time. Work done at home or outside designated class hours will not be accepted for credit.
4. **All content must be school appropriate**: Think "E-rated"!

Violations of these policies will result in the work not being accepted for credit, and serious violations may lead to removal from the course.

Cheating/Plagiarism:
Students are expected to do their own work. Cheating and plagiarism (presenting another's work as one's own) will not be tolerated. Generative AI works are not considered authored by the student.

DigiPen College Transfer Credit:
This course offers the opportunity to earn college transfer credit, meaning that you may be eligible to transfer credits to a college or university upon successful completion. Students have the option to pursue college transfer credit for the following DigiPen courses:

- ***DES100 Introduction to Design Process*** *- This course introduces the design process as it applies to interactive experiences. Topics include exploration, research, proposals, prototypes, iteration, and polishing of an interactive experience.*

- ***DES115 Introduction to Game Design—****This course introduces game design theory and the process of designing games. Topics may include design principles, writing rules, playtesting, game state, randomness, hidden information, and game balance.*
- ***GAM120 Introduction to Digital Production -*** *This course introduces the workflows, methodologies, and best practices for working within a modern digital game development environment. Topics may include game editors, components, basic scripting, input processing, importing art and audio, level creation, and source control.*

Students must "declare intent" to pursue college transfer credit. They will be evaluated using a separate rubric and issued a separate college transfer credit transcript by DigiPen Academy. Full-year attendance is required.

Please note:

1. Only students who have earned an "Advanced" or "Mastery" grade for all assignments in that college course will receive a college transfer credit transcript.
2. DigiPen College Transfer Credit is separate from the WANIC grade recorded on a student's high school transcript.
3. Students interested in college transfer credit pathways must submit a completed declaration of intent form with a parental/guardian signature. The instructor will provide declaration of intent forms. DigiPen Academy may choose to decline students who do not currently demonstrate the prerequisite level of competency necessary for college content.
4. Withdrawal from college transfer credit must be formalized through a withdrawal form, which must also have a parental/guardian signature.
5. Parents/guardians are expected to monitor student progress which will be posted on Canvas.
6. Each individual institution determines whether these credits are accepted, so it's important to check with your chosen college or university for their specific policies and to confirm whether the credit will be accepted.

Advanced Placement (AP):

Some DigiPen WANIC courses offer Advanced Placement (AP) credit. If a student intends to take their course's corresponding AP exam, it is the student's responsibility to register for the exam through their home high school at the beginning of the school year. DigiPen WANIC **does not** administer/proctor any AP exam.

Course Competencies:
Below are the essential concepts and skills ("grammar") students must master in this course. Those who demonstrate competency early can advance to other key concepts or work on independent projects during the studio portion of the course.

Analog Design

- Anatomy of a game
    - Understand the differences between and how to utilize game types, genres, and themes
    - Anatomy of a game - Student Understand game and utilize game pillars.
    - Anatomy of a game - Student understands core elements of a game including Systems and Mechanics
- Technical
    - Students can create a well written rulebook
    - Can create a game design document.
    - Be able to use Excel for simple mathematical functions
- Player Motivation
    - Understands how to utilize the MDA Framework to target an emotional experience.
    - Understand Basic Psychological Needs and how they are satisfied in games.
    - Understand how to satisfy Autonomy
    - Understand how to satisfy Competence/Mastery
- Game Components
    - Students understand what a resource is and how to manipulate resources to drive Agency and Rewards.
    - Create meaningful opportunities for Agency to satisfy need for Autonomy
    - Create systemic Rewards using resources that satisfy needs for Competence
    - Create non-systemic Rewards using feedback that satisfy needs for Competence
    - Understand the role of and how to design Hidden Information in games.
    - Randomness
        - Randomness - Understanding randomness and chance
        - Calculating simple probabilities: coin flips, dice rolls, and card draws
        - Incorporating randomness in-game mechanics to ensure fairness and replicability
        - Understand and read random range of variable distribution
        - Can calculate the possibility space of a given scenario

Narrative

- Anatomy of a game

    - Understand different Scales in game narrative.
    - Understand what Arcs are in narratives and various Arcs.
    - Can construct Arcs at various Scales.
    - Can nest Arcs at various Scales.
- Player Motivation
    - Understand how to satisfy Relatedness through Storytelling.
    - Understand how to satisfy Autonomy through Storytelling.
- Components
    - Understand how to create and reward narrative decisions.
    - Understand common structures of interactive storytelling.
    - Understand how to construct narrative rewards.
    - Understand how narrative design to game systems.
    - Understand roles of characters within a story.

Digital Development

- Technical
    - Understand basic syntax including conditionals, inputs, variables, and invoking methods.
    - Can create kinematic player controllers that feel good to control.
    - Can implement assets into game engines
    - Can implement menus in game engines.
    - Can create, display, and modify resources in game engines.
    - Utilize functions to reuse and organize code
    - Students can debug programs independently.
    - Habitually comments code.
    - Students can adjust variables to create new or tune existing game content
- Project Management
    - Understand the expectations of each step of the production process
    - Understand how to break down goals into smaller actionable tasks
    - Be able to use Project Management software such as Trello
    - Understand the importance of an MVP in each development phase

UX

- Anatomy of a Game
    - Understand Affordances, Signifiers, and Feedback to create compelling mechanics
    - Understand how to document ASF
- Player Motivation
    - Understand player motivation and engagement theories

    - Understand Player archetypes and user personas
- Art
    - Be able to apply Color Theory and themes intentionally
    - Understand the basics of shape languages
    - Understand the basics of Value and Contrast to create visual readability
    - Can create basic sprite sheet animations
    - Can create readable characters and environments.
- Audio
    - Familiarity with common musical elements (simplified).
    - Knowledge of how to source basic sound effects.
    - Understanding the importance of placeholder sounds for testing.
- Technical
    - Can tune game feel using Min-Max and Binary Search approaches

Level

- Anatomy of a Game
    - Understand how to create and document a Level Arc
    - Understand how scales apply to level design.
    - Be able to design Gameplay Beats and level sequences based on game mechanics
    - Understand the constitution of a challenge and obstacles
- Technical
    - Understanding how to document levels.
- Project Management
    - Be able to create a production schedule and iterate during the development process.
    - Be able to produce an investor pitch
- Player Motivation
    - Understand how to satisfy Competence through skill growth.
- Components
    - Create Expansions and Evolutions in the CSST Framework

Group Project

- Project Management
    - Understand different roles in Game Development
    - Be able to collaborate with other classmates to create a team project

Statistics

- Technical
    - Understand what statistics are and types of data.

    - Describe data based on measures of center and variability
    - Understand and remove outliers from datasets
    - Understand how to communicate data with graphs.
    - Be able to calculate the possibility space of a given scenario
    - Analyzing Regression & Correlation
    - Draw conclusions from datasets to impact game design

Capstone

- Career Development
    - Be able to create a project tailored towards growth goals.

Playtesting

- Students iterate based on peer feedback
- Students generate research questions and operational definitions to guide playtesting
- Students clearly answer research questions in playtest report
- Students generate recommendations based on playtest data
- Students are respectful to playtest participants and allow participants to make mistakes without interruption

Assessments will include:

- **Project-based Assignments:** Students will showcase their understanding by designing and iterating on game projects.
- **Written Reflections:** Students will write reflections on readings, lectures, and personal experiences to articulate their understanding of concepts.
- **Peer Reviews:** Students will participate in giving and receiving feedback on game projects.
- **Portfolio Submission:** A culmination of their work throughout the year.
- **Capstone Project:** A final project where students design a game from concept to release candidate.

Additional Policies and Course Requirements

WANIC Expectations & Policies – Student Handbook:

Students are expected to review and follow the school rules, procedures, and processes outlined in the WANIC Student Handbook. WANIC Skill Center follows Lake Washington School District policies. Rules will not be reprinted in the syllabi.

Program Schedule & Hours

DigiPen WANIC follows the Lake Washington School District (LWSD) calendar. All students are expected to attend classes per the LWSD calendar. This means that even if their home high school is not in session (e.g., LEAP days, snow days, mid-winter break, spring break), students are expected to attend the DigiPen WANIC class.

Classes run Monday to Friday and there are two sessions:

- 7:15 a.m. - 9:45 a.m.
- 12:30 p.m. - 3:00 p.m.

DigiPen does not assume any responsibility for students before or after scheduled class times. If a student arrives more than 15 minutes before the start of class, they should stay in the DigiPen café and not wander through the campus. Teachers will NOT allow students into the classroom until 15 minutes before scheduled start.

Behavioral Expectations:

- Students are always expected to maintain a respectful and professional demeanor. This includes respecting the opinions and contributions of peers, instructors, administrative staff, and guest speakers. Bullying or threatening others, whether online or in person, is not permitted.
- Do not damage or steal anyone's personal property, or DigiPen property or equipment.
- Walk in the hallways and classrooms and stay with your class unless you have permission to do otherwise.
- Students must notify the Instructor if they need to leave the classroom in the middle of class. Any time a student leaves the classroom, they must sign out on the Sign-Out/Sign-In sheet in the class binder, and sign back in when they return to the classroom.

Disruptive Behavior Policy:

Disruptive Behavior is considered anything that negatively impacts others' ability to learn and work during dedicated class time.

- Step 1: Student receives a verbal warning from the instructor, and an internal record is made.

- Step 2: Should the behavior continue or escalate, student will meet with office admin. Parent/Guardian will be notified by admin staff via email/phone call.
- Step 3: Depending on the circumstances and nature of the behavior, the student may not be allowed to continue with the WANIC program until a parent-teacher conference is conducted.

Attendance Policies:

Parents/guardians must email WANIC (wanic@lwsd.org) and DigiPen (wanic@digipen.edu) if a student will be absent, late, or needs to leave early. Failure to notify will result in unexcused absences. Students are responsible for coordinating with instructors to make up missed class time.

To be dismissed early, a parent/guardian must notify wanic@lwsd.org AND wanic@digipen.edu prior. If the office does not receive notification, students may not leave until notification has been received from a parent/guardian (via email or phone).

Being 30 minutes late or more will be recorded as an absence; however, we still encourage students to attend class even if they can only make it for a portion.

- If you are late to class, you are marked as **TARDY.**
- If you arrive **+30 minutes late,** you are marked as **ABSENT.**
    - When marked as ABSENT, a phone call and email will be sent home. **Parent/Guardian must notify the office to excuse the absence.**

For late pick-up, please note that WANIC staff and classrooms are not available after 3:30PM. If the student's ride home is arriving after 3:30PM, students must wait downstairs in the front lobby entrance or cafe. If you are aware of the delayed pick-up ahead of time, please notify the WANIC office via email at wanic@lwsd.org AND wanic@digipen.edu.

If the student does not have a phone, they may ask to use the front desk or security's phone to call. If the parent/guardian needs to contact DigiPen after 3:30 p.m., please call the front desk line at (425) 629-5000.

WANIC Attendance Policies and Procedures: https://wanic.lwsd.org/students-and-families/attendance

****Families are asked to avoid calling or texting students during WANIC class time. For urgent needs, please contact the DigiPen WANIC office at (425) 629-5007 or wanic@digipen.edu.**

Food & Drink:

No food is allowed in the classrooms. Drinks must be in sealed containers.

Technology Use Policy:

During all instructional time, personal electronic devices must be silenced, not visible, and not in use. This includes but is not limited to cell phones, smartwatches, smart glasses and other wearable technology, personal laptops and tablets, and any other device capable of communication, internet access or audio, video, or image capture.

- Non-educational use of devices (e.g., laptops, phones, tablets) during class is prohibited to ensure a focused learning environment.
- Misuse of school or personal technology may lead to the device being temporarily confiscated during class time or other appropriate actions being taken.
- No cell phone usage in class: Cell phones should be silenced and put away during class time. Use of cell phones should only be used when approved by instructors for curriculum use. Recording of any kind is prohibited on campus.
- Proper Use of Equipment: School devices are monitored by DigiPen IT.
    - Do not download anything onto school laptops or devices unless permitted by the instructor.
    - Do not log in to your personal accounts (such as personal or school district Google Drive, One Drive, Microsoft accounts etc.).
- Notify the instructor if you encounter any issues or faulty equipment right away.

Personal devices, including phones, may be used only for educational purposes during class. Non-educational use is prohibited to ensure focus. Misuse of any personal technology in the classroom may result in temporarily confiscating the device or other appropriate actions.

****Families are asked to avoid calling or texting students during WANIC class time. For urgent needs, please contact the DigiPen WANIC office at (425) 629-5007 or wanic@digipen.edu.**

Please Note:

- The policies listed in this syllabus may be updated throughout the year, and we will notify you of any changes.
- DigiPen is a private institution independent from Washington state school districts. As a result, some policies may differ from those of your school or district.
- The WANIC program is specifically designed for minors, meaning certain policies will differ from those that apply to DigiPen's college programs.
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