# Introduction

This document outlines the requirements for the Game Design Document (GDD) required for GAM150. All listed sections must be included, and they must be in the order listed.

Always remember that design documents are only tools to help you make a better game. While they are important, be careful that you don’t spend all your time making a 50 to 80 page design document when you should have been coding on your game. Most student games need only a 20-30 page GDD. ***However, 7-15 pages are recommended for GAM150 projects.***

Design is an iterative process—you aren’t going to know everything at the beginning. While you should try to think through as much of your design as possible in this document, don’t worry about getting it perfect or entirely fleshed out. In particular, you should cut the design down to what you need for a really good first playable. Anything in the design that isn’t critical to a good first playable should be labeled as such (mark these items with a different color, in italics, or whatever works for you).

Some overall guidelines:

* Every page must have a page number (except for the cover page), your game title, and the DigiPen copyright (“All content © 2014 DigiPen (USA) Corporation, all rights reserved.”).
* Documents must be neatly formatted and easily readable. Put page breaks before new sections (when appropriate), use consistent formatting and fonts, use headings for sections and sub-sections, etc. Sloppy documents are unprofessional and may prevent your project from getting funding.
* Spell-check and grammar-check the document before submission.
* Avoid ambiguous statements such as “I would like to have [X feature] in the game.” Instead, describe the features as they would appear in the game and then indicate those features that are “stretch goals”, meaning that they may have to be cut due to schedule or technical limitations.
* Avoid the use of personal pronouns (I, we, etc.)

Design documents are an art, not a science, so there is no perfect way to write one. If you are unsure about anything in this document, make sure you talk to your instructors about it and about how to make your design documents effective for your game.

# Cover Page

The cover page should contain the following information:

* Game Title
* “Game Design Document”
* Class name and section (e.g. GAM150S14-A – GAM150S14-E)
* Semester and year (e.g. Spring 2014)
* Team Name
* Team Roster – List all members of the team, including the following information:
  + Student name
  + Official job (or jobs)
  + Coding responsibilities

# Table of Contents

The GDD must contain a table of contents (TOC). Make sure the TOC is updated every time the GDD is submitted. If necessary, refer to the Word documentation for help on adding and updating TOCs.

# GDD Structure

## High Concept

Describe the game in 12 to 20 words, including the look, genre and theme of the game. Use terms such as 2D/3D, fast-paced, turn-based, platformer, exploration, etc., as appropriate, to describe the game as clearly and concisely as possible.

## Summary

Provide a summary/overview of the game in one to three paragraphs. Imagine having just one minute to convince someone to buy your game—what would you say?

## Story

If the game has more story than fits in the summary, then put it here (otherwise just leave this section out). If the story is more than a page in length, then summarize it in this section and include the entire story in the appendix.

## Game Flow

Describe how the game experience works. What does the player do when gameplay starts? How will this immediately engage him in the game? How will he progress? Why will he want to progress? What is nature of the experience he should be having (action, thinking, etc.)? What are the “verbs” of the game? How long does a single session take? This section does not have to be super-detailed and is obviously speculative in nature—the point is to get across the intended game experience. If this section is more than several pages long, you should be making a simpler game—one page is usually enough for the scope you should be aiming at.

## Game Mechanics

How do things move? How is damage done? How do you score points? How do you win? How do you lose? What statistics does the game use? What do they do? How does line-of-sight work? How about noise detection?

## Game Characters

Describe all characters in the game (whether they are player-controlled or enemies), along with their statistics, abilities, purpose, concept art (which can just be stick-figures if that’s all you know how to do), backstory, etc. Note that a “character” could be a human, a tank, a spaceship, an army, a country, etc. Only simple puzzle games will not have any characters.

## Game Resources

Describe all resources in the game, along with their statistics, abilities, purpose, concept art, etc. Resources include character equipment, ammunition, power-ups, etc.

## Game Environment

Describe the environments in which the game takes place, and any related game mechanics. How do characters interact with terrain? How does the environment affect movement, do damage, etc.? Note that you do not have to design all your levels here, but you should describe the general nature of the type of levels you are thinking of (and how many).

## Game Controls

Describe in detail the interface that the player uses to control the game (buttons, keys, mouse movements, game menus, etc.). Note that this does not need to include any interface used to get into the game, set options, choose maps, select music tracks, chat, etc., even if it is possible to do some of those things while actually playing the game. If you feel some of those interface elements are integral to how the game plays, you can describe them here, but otherwise put them in the TDD instead.

## Visual Design

What is the visual look of the game? Without worrying about how the graphics will be implemented in code, describe the desired look of the game. Is the game 2D, 3D, or something in-between? Is there perspective? How does the camera move? What kind of special effects are there? Is the look stylized or realistic? Is specialized lighting needed? What is the overall feel that you are going for? A mock-up of some kind would be very useful in this section (even if just hand-drawn).

## Audio Design

What is the way the game will sound? Without worrying about how the audio will be implemented in code, describe the desired soundscape of the game. Is there music? How much and what kinds? Is the music tied to particular parts of the game? What kind of feel do you want from the sound effects? Is there recorded voice in the game?

## Behavior Design

What type of behaviors will computer-controlled characters need? Without worrying about how they will be implemented in code, describe any behaviors that are needed for the game-play to work. Do they use pattern movement? Do they need path-finding? Do they cooperate? Do they need real tactical, strategic, or economic AI? Do they need to have personality? How smart do they need to be?

## Physics Design

What kinds of physics will the game need? Without worrying about how the physics will be implemented in code, describe any physical phenomena necessary for the game-play to work. Simple collision and response? Rotating objects? Gravity? Buoyancy? Friction? Rope? Springs? Cloth? This isn’t about what the physics engine is capable of, it’s about what the game-play requires.

## Multiplayer Design

What type of multiplayer, if any, does the game have? Without worrying about how multiplayer will be implemented in code, describe how the game is different with more than one player. What is the maximum number of players? Do AI bots take over for missing players? Are victory conditions different with more players? Is the multiplayer game cooperative or competitive? Does the game actually have networking, or is it multiplayer on a single machine? If the game is going to have a lot of different multiplayer modes, describe them all.

# Appendices

## Appendix A: Story

If the game has more story than fits in the introduction section above, then place it here. Otherwise this section can be omitted. With a story-heavy game, this section could be dozens of pages, but making such a game for a student project is usually not wise.

## Appendix B+: Miscellaneous

If there are aspects of your design that do not fit in to any of the categories listed above, then create your own appendices for that material.