

AI-Partnered Game Design Challenge + Prompts



AI-Partnered Game Design Challenge - Build a Game to Teach a New Venture Finance Topic

Course: New Venture Finance

Mode: Human-centered design + AI-augmented creativity

Outcome: Students design a playable game (card, board, simulation, or role-play) that teaches a real finance mechanism with conceptual integrity. *Students learn the concepts of human centered design, game design, teaching a new venture finance course, and working collaboratively with an AI bot to create something useful.*



Goal of the Assignment

You will **design a game** that captures the *mechanisms, constructs, relationships, incentives, and decisions* of a topic in new venture finance.

Examples include (but are not limited to):

- runway management
- working capital cycles
- dilution
- cap table dynamics
- burn rate forecasting
- SAFE vs convertible notes
- liquidation preferences
- milestone-based financing
- valuation heuristics (comparables, step-up, VC method)
- option pools + hiring
- customer acquisition payback
- unit economics
- revenue-based financing
- lender covenants
- pre-seed vs seed stage difference

Your game must be designed **with the help of an AI partner** (ChatGPT, Claude, Gemini, etc.). **You will document your collaboration throughout. (In other words, copy and send your entire prompt session into the body of an email to me at MGT481bama@gmail.com)**

Overview of the Design Process

Your deliverable (the game) will emerge from **five steps**:

1. **Discover the Problem (HCD Lens: Desirability)**
2. **Define the Finance Mechanism as a System (Mechanisms → Constructs → Relationships → Outcomes)**
3. **Design the Game Space (players, goals, constraints, actions, resources)**
4. **Prototype the Rules (your first “minimum playable” version)**
5. **Playtest + Refine Using AI and Human Feedback**

This mirrors the way entrepreneurs design products: understand → define → create → test → iterate.

STUDENT INSTRUCTION SET / PROMPT DECK

(Copy these directly into your conversation with your AI bot.)

Prompt 1 — Topic Discovery (Human-Centered Design)

Copy/paste to your AI:

*I need to identify a topic in new venture finance that can become the basis of a teaching game. You are an expert on the topics of game design and mechanisms *and* teaching new venture finance topics. You will help me brainstorm which finance concepts are hard for students to understand or frequently misunderstood by*

entrepreneurs. You can ask me (the student), for example, what topics I found challenging in new venture finance. For each concept we list in our brainstorm, explain why it is a good candidate for a game and what decisions, tensions, or tradeoffs the game might highlight. For example, a good candidate for a game based on a new venture finance topic is one that can be translated into rules, artifacts, boundaries, and knowledge needed to play the game and that students can start playing the game with minimal upfront instruction.

Then pick 1 topic.

Prompt 2 — User and Problem Definition (HCD: Desirability + Problem Framing)

Copy/paste to your AI:

Help me define the user for this game (e.g., new venture finance students, entrepreneurs, founders, interns, CFO students). What problem or confusion does the user experience with this finance topic? What misconceptions, mental models, or hidden mechanisms create learning gaps? Convert this into a sharp problem statement.

Your output here becomes your **reason for designing the game**.

Prompt 3 — Mechanisms Before Mechanics

(This step ensures your game teaches a *finance system*, not trivia.)

Copy/paste to your AI:

Help me decompose this finance topic into its underlying mechanisms. Identify the constructs, relationships, decisions, and dynamic processes that matter. Describe what changes over time, what players must monitor, what tradeoffs they face, and what success or failure looks like—in real ventures. Then propose the 3–5 most important mechanisms my game should simulate.

Your game's conceptual integrity comes from this step.

Prompt 4 — Game Space Definition (Mechanics That Model Mechanisms)

Copy/paste to your AI:

Using the mechanisms identified above, help me translate them into game elements:

- players and roles*
- objectives and win conditions*
- resources*
- constraints*
- uncertainty*
- actions and choices*
- consequences of choices*
- time progression (rounds, cycles, turns)*
- incentives, rewards, penalties*

Propose a few different possible game formats (board game, card game, role-play simulation, bidding system, negotiation game, AI-driven scenario game) and explain how each format could embody the finance mechanisms.

You will now have 2–3 possible game structures.

Prompt 5 — Minimum Playable Prototype (The MPP)

Copy/paste to your AI:

Help me build a minimum playable prototype of Version 1 of the game. Write clear rules, turn order, resource list, scoring/winning system, and example gameplay.

Keep it simple enough to play in 10 minutes, but robust enough that the core finance mechanism becomes visible.

This yields a **Version 1 rulebook**.

Prompt 6 — Playtest & Reflection

Copy/paste to your AI:

I will now “simulate” a playtest with you as both facilitator and player. Walk me through 2 rounds of the game, narrating the choices, learning outcomes, and finance decisions occurring. Then propose three improvements to better link the gameplay to the real finance mechanism.

This step reveals whether the game actually teaches the finance concept.

Prompt 7 — Final Polish + Educator Version

Copy/paste to your AI:

Help me produce:

- a short designer’s statement*
- a paragraph explaining the finance learning objectives*
- the final rule sheet*
- a 1-page explanation for instructors on how to use the game in class.*

This is your “shipping” package.

Students: when you have completed this activity, please copy the contents of your prompt session and paste them into the body of an email you send to me at MGT481BAMA@gmail.com.

Skill Development Through Game Design

Skill Development Through New Venture Finance Game Design

How This Assignment Builds Real Competencies Employers Want

Skill to Build	How the Game Design Project Builds This Skill	What Students Actually Do (Activities / Behaviors)	Implementation Tips for You (Instructor)
Systems Thinking & Financial Mechanism Insight	Students must break a finance topic (e.g., runway, dilution, working capital cycles) into underlying constructs, interactions, incentives, and processes .	• Map mechanisms: cash flows, milestones, burn rates, incentives, risk. • Identify causal relationships (if X changes → Y shifts). • Translate system dynamics into game mechanics.	Give students templates for decomposing mechanisms: “constructs → relationships → decisions → outcomes.” Emphasize fidelity to real venture finance.
Human-Centered Design (HCD)	Students must design a game that is desirable, usable, and meaningful for other learners. They learn to empathize with users and anticipate confusion.	• Interview or survey classmates: “What’s hard about this finance topic?” • Identify user pain points and misconceptions. • Define a problem statement before building.	Require a short HCD “desirability justification” with evidence that their game addresses a real learning gap.

Creativity & Innovation	Game design demands invention: novel constraints, uncertainty systems, role structures, scoring models, and narrative framing.	• Brainstorm multiple game formats. • Use AI to generate alternative ideas and analogical inspirations. • Move from abstract idea → concrete rules.	Encourage divergent → convergent thinking. Allow whimsical early ideas. Reinforce that creativity solves conceptual problems, not just aesthetics.
Analytical Reasoning & Conceptual Accuracy	Students must ensure the game's structure accurately models finance principles. They learn precision, correctness, and logical coherence.	• Validate that game outcomes mimic real venture scenarios. • Justify each mechanic ("this rule teaches X concept"). • Run quick simulations to test logical consistency.	Push students to defend mechanism choices. Ask: "What finance truth does this rule reveal?"
AI Collaboration & Prompt Crafting	Students work alongside an AI partner to refine ideas, test prototypes, and improve rules. They practice directing the AI, not letting it take over.	• Use structured prompts to: generate ideas, decompose mechanisms, prototype rules, simulate gameplay. • Document iterative improvements.	Require brief "AI Collaboration Logs" showing iteration, prompt tuning, and judgment about when AI outputs were accepted or rejected.
Communication & Translation of Complex Ideas	Students learn to explain finance concepts in simple rules, examples, and metaphors—the same skill needed to communicate with co-founders or investors.	• Write a clear, concise rulebook. • Present learning objectives for non-finance audiences. • Explain how mechanics reveal underlying finance truths.	Provide examples of "conceptual translation." Emphasize clarity, conciseness, and storytelling.

Teamwork, Coordination & Role Differentiation	Designing a playable game requires negotiation, division of labor, merging perspectives, and collaborative iteration—mirroring entrepreneurial team dynamics.	• Iterate designs as a team. • Assign roles (mechanics designer, finance accuracy reviewer, user experience tester). • Conduct group playtesting.	Encourage team sprints. Require one reflection on team process: “What did we learn about working like a startup?”
Rapid Experimentation & Adaptability	Students prototype quickly, playtest, observe flaws, and revise—mirroring Lean Startup cycles and employer expectations for iterative problem-solving.	• Produce a minimum playable prototype. • Conduct a 10-minute test. • Identify failures, revise rules, test again.	Stress that iteration is expected, not a sign of weakness. Give time for “fast cycles.”
Ethical Reasoning & Fairness	Game mechanics force students to confront equity, risk, incentives, and fairness (e.g., liquidation preferences, insider advantages, investor power).	• Ask: “Does this mechanic reward exploitative behavior?” • Evaluate ethical trade-offs embedded in financial deals. • Build mechanics that make fairness (or unfairness) visible.	Add an ethics reflection: “What behaviors does your game reward? Does it reflect real-world ethical tensions?”
Strategic Thinking & Decision-Making	Games simulate constrained environments where players must choose among imperfect options—a proxy for entrepreneurial strategy.	• Create decision points: raise or wait? • Model trade-offs (equity vs runway, dilution vs survival). • Clarify win conditions aligned with strategic success.	Push students to embed real dilemmas. Ask: “Where is the tension in your finance concept?”

**Documentation,
Structure &
Professionalism**

Students must produce a coherent package: designer's statement, rulebook, explainer sheet, learning objectives, and artifact logic.

- Assemble a final submission containing rules, diagrams, AI logs, and finance explanations.
- Format cleanly and professionally.

Share exemplars. Provide templates for rulebooks and instructor guides.

**Lifelong
Learning &
Tool-Agnostic
Mindset**

Students learn how to learn: how to explore new tools, evaluate them, adapt ideas, and push boundaries—exactly what future careers require.

- Use AI tools of their choice.
- Learn at least one new creative or analytical tool during the project.
- Integrate feedback and evolving understanding.

Reinforce that adaptability > tool mastery. Celebrate experimentalism. Ask: “What changed in your understanding since starting this project?”

★ High-Level AI Engagement Résumé Bullet Points

★ High-Level AI Engagement Résumé Bullet Points (Students Can Copy/Paste)

Here are **résumé-ready bullet points** your students can use to signal *high-level, abstract, cognitively sophisticated* engagement with AI—aligned directly with the skills from your revised table.

These bullets avoid sounding like “I used ChatGPT,” and instead emphasize **AI collaboration, systems thinking, design logic, abstraction, iteration, and judgment**—exactly what employers value.

AI Collaboration & Prompt Crafting

- Collaborated with AI as a design and reasoning partner to iteratively refine concepts, rules, and prototypes for a finance-focused educational game.
- Engineered multi-step prompts to guide AI through decomposition of complex financial systems into constructs, causal relationships, and decision mechanisms.
- Evaluated AI-generated ideas critically, selecting, modifying, or rejecting outputs based on conceptual accuracy and user-centered criteria.

Systems Thinking & Conceptual Modeling with AI

- Used AI tools to translate venture finance mechanisms (runway, dilution, working capital cycles, etc.) into coherent system models, revealing hidden interactions and trade-offs.
- Employed AI to simulate gameplay scenarios and analyze emergent behavior to ensure fidelity between game mechanics and real venture finance dynamics.
- Partnered with AI to stress-test the internal logic of complex financial decision systems, refining models through iterative scenario generation.

Human-Centered Design with AI

- Applied AI-assisted user research to identify learning pain points and misconceptions, shaping a finance teaching tool that met real user needs.
- Used AI to generate multiple user personas, analyze learning barriers, and validate the desirability and usability of a designed learning experience.
- Integrated AI feedback loops to align game experience with human-centered design principles of clarity, engagement, and instructor utility.

Analytical Reasoning & Abstraction Through AI

- Collaborated with AI to abstract financial principles into game mechanics that preserved conceptual accuracy while simplifying user experience.
- Used AI to break down ambiguous or complex finance concepts into analyzable components, enabling precise rulemaking and prototype development.
- Leveraged AI to compare alternative modeling approaches and evaluate the conceptual trade-offs of different mechanics.

Creativity & Innovation with AI Support

- Co-created novel game structures by combining human ideation with AI-generated analogies, metaphors, and conceptual mappings.
- Used AI to explore divergent creative directions before converging on a viable design solution rooted in finance theory.
- Integrated AI-generated design variations into a rapid prototyping cycle, accelerating innovation and iteration.

Rapid Experimentation & Iterative Development

- Employed AI tools as rapid prototyping engines to test multiple versions of a game system, evaluate failure points, and iterate based on emergent patterns.

- Conducted AI-assisted playtests to identify logical inconsistencies, refine decision pathways, and optimize learning flow.
- Utilized AI simulations to forecast how rule changes would affect player strategies, incentives, and learning outcomes.

Communication & Translation of Complex Ideas

- Worked with AI to translate technical finance mechanisms into approachable rule sets and learning tools for non-financial audiences.
- Used AI as a clarity and structure coach to strengthen the precision, readability, and narrative coherence of instructional materials.
- Collaborated with AI to prepare instructor-facing guidance documents explaining the conceptual basis and learning objectives of the designed game.

Ethical Reasoning & Responsible AI Use

- Evaluated the ethical implications of game rules and AI-generated suggestions, including fairness, bias, and incentive alignment.
- Applied AI critically to surface ethical tensions inherent in real venture finance mechanisms (e.g., power dynamics, information asymmetry).
- Demonstrated responsible AI use by documenting judgments, adjustments, and constraints placed on AI outputs.

Adaptability & Lifelong Learning Mindset

- Learned and adapted to new AI tools independently, demonstrating flexibility and self-directed mastery of emerging technologies.
- Developed a tool-agnostic mindset by using AI to compare multiple solution pathways and adapting approaches as projects evolved.

- Demonstrated agility in blending human insight with AI-generated suggestions to solve open-ended design challenges.
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Optional Short “Résumé Summary Line”

Students can also include a single summary line like:

Developed advanced AI collaboration skills by designing a system-based educational game in partnership with an AI agent, using iterative prototyping, HCD methods, and conceptual modeling to translate complex finance mechanisms into an engaging learning experience.