**Arithmagician Project Schedule**

Green highlighted text indicates task completion.

Yellow highlighted text indicates task deferment.

Red highlighted text indicates task failure or abandonment.

Cyan highlighted text indicates new task completion.

**Sprint 0: Jan 8-21**

* Game concept development
* Language and framework choice finalization (Typescript, node.js)
* Data structure planning
* Game constants and standards development
* Submission of project proposal
* Finalizations and acceptance of project proposal by professor
* Editor GUI development
  + HTML elements
  + Zooming and panning
  + Grid rendering
  + Tile type viewer/selector
* Test asset creation
  + Font
  + Walls
  + Blocks
  + Floors
* Tileset assembly code
* Primitive object creation (Rect, Point, Rational, Size)
* Sprint post-mortem, update schedule

**Sprint 1: Jan 22-Feb 4**

* Game concept refinement and discussion
* Editor object creation and rendering
* Game object connection calculation and rendering
* Roof layer
* Tools and actions
  + Build
  + Connect
* Layer visibility and interactivity
  + Lock
  + Hide
  + Highlight
* Object layer cell inspector design and implementation
  + Data
  + Ports
* Position rendering
* Sprint post-mortem, update schedule

**Sprint 2: Feb 5-18**

* Asset development
  + Definitions
  + Functions
  + Constants
  + Variables
* Selection tool
  + Cell select/unselect
  + Drag select/unselect
  + Delete/cut/copy/paste
* Integer, rational, Boolean value and operator overlay rendering
* Undo/redo stacks
* Save/load implementation
  + Save/load compression/decompression
* Character image development
* Educator consultation and brainstorming
* Sprint post-mortem, update schedule

**Sprint 3: Feb 19-Mar 3**

* Engine development
  + Camera
  + FPS tracking/throttling
  + Fixed size render/scaling
  + Input manager and movement
  + Recursive pushing code
  + Global game variables
  + Lasers
* Test button and test tab creation
* Sprint post-mortem, update schedule

**Sprint 4: Mar 4-17**

* In-game text display
  + Box builder
  + Font assembler
* Asset creation
  + Tileset templates
  + Music/ambience
    - Woods
    - Gardens
    - Halls
    - Keep
    - Dungeon
    - Mountain
    - Mine
    - Catacombs
  + Sounds
    - Walking
    - Pushing
    - Sliding
    - Fire
    - Laser
* Simple effect/fragment shader framework development
  + Day/night
  + Snow/rain
  + Leaves
  + Radial light
* Sprint post-mortem, update schedule

**Sprint 5: Mar 18-31**

* Level design
* Shader creation
* Tileset transitions coding
  + Music/ambience volume
  + Shader prevalence/opacity
* Offline testing (me)
* Sprint post-mortem, update schedule

**Sprint 6: Apr 1-14**

* World building
  + Brainstorming
  + Story writing
  + Tome strings
* More shader creation
* Account creation/login screen
* S3, Lambda, and DynamoDB integration
* Hosted testing (me)
* Sprint post-mortem, update schedule

**Sprint 7: Apr 15-**

* Hosted testing (volunteers)
* Polish
  + Small bug fixes
  + Optimization code
  + Asset refinement
* Final report and oral presentation prep
* Sprint post-mortem, update schedule
* Continued development

**Hours estimate: 300**