Computer Games Laboratory

I15, Kick-off
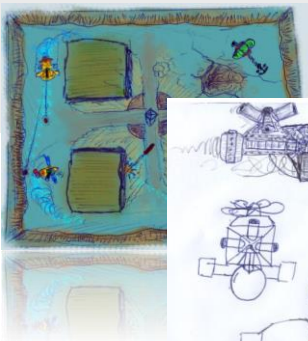
# Instructors

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Course Goals

1. Design & implement your own game project

2. Learn and apply central elements of modern computer game design and programming

3. Practice "soft skills" and project management

4. Reinforce CS and graphics knowledge

Course Goals

- Capstone course: cumulative knowledge transferred to task of creating video game

Game Lab(s)

GE Master

GE Bachelor
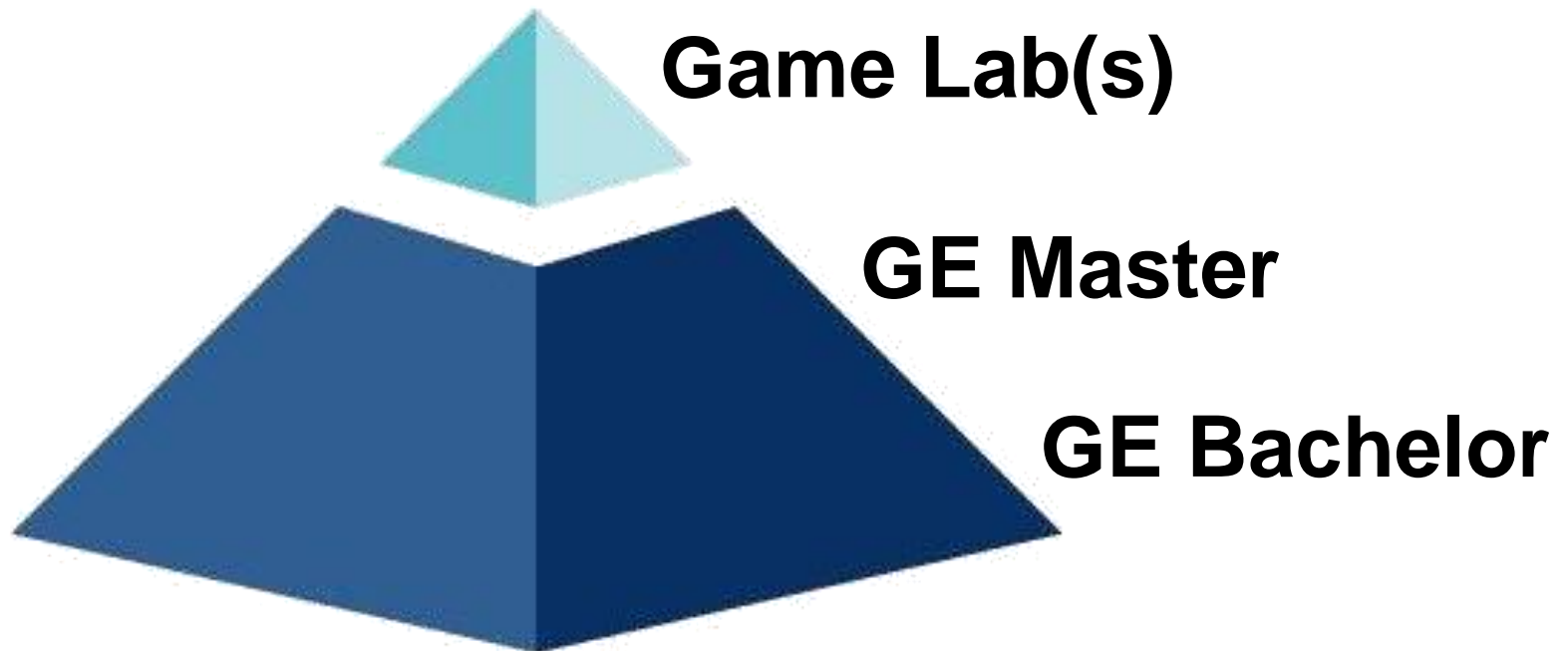
Prerequisites

- Strong interest in computer graphics and game tech

- Intro (advanced) courses in computer graphics

- Ability and interest to work in teams

- Some artistic skills can help

- Time & motivation

Course Elements

- Lectures: background & basics, structure

- Milestones: delivery deadlines, documentation

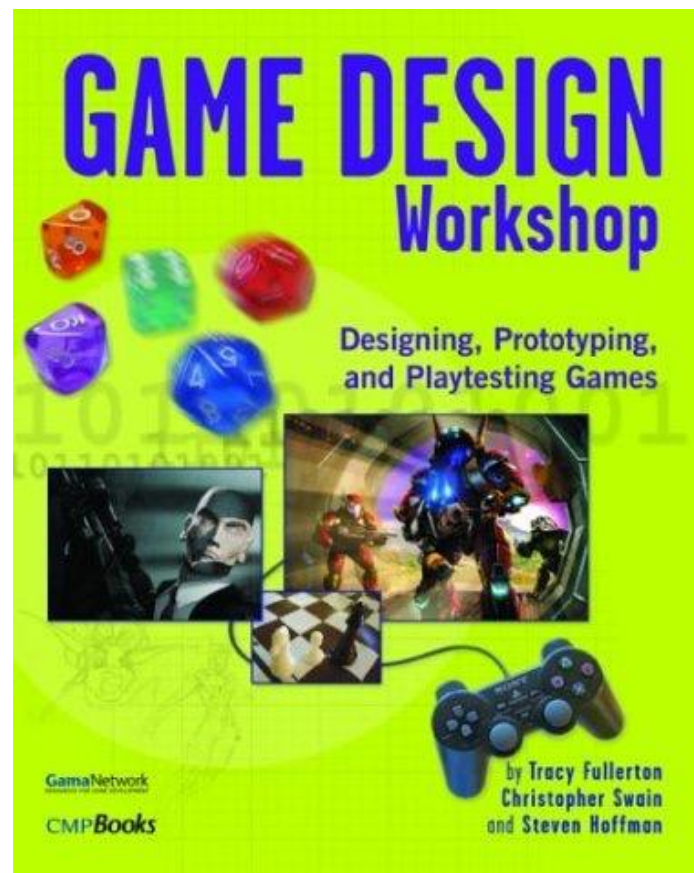- Presentations: get feedback, track progress

Grading

- We will track your performance
  - Each of you: private summary of own contributions

- Project plays most important role
- Criteria:
  - Technical & artistic complexity of project
  - Project plan and milestones met
  - Assignments
  - Presentations
  - Teamwork
  - Creativity

Resources

- Main Website:
  - https://www.in.tum.de/cg/teaching/summer-term-23/computer-games-laboratory/
  - Project structure / assignments
  - Lecture slides
  - …
- Wiki
  - Upload your contributions there
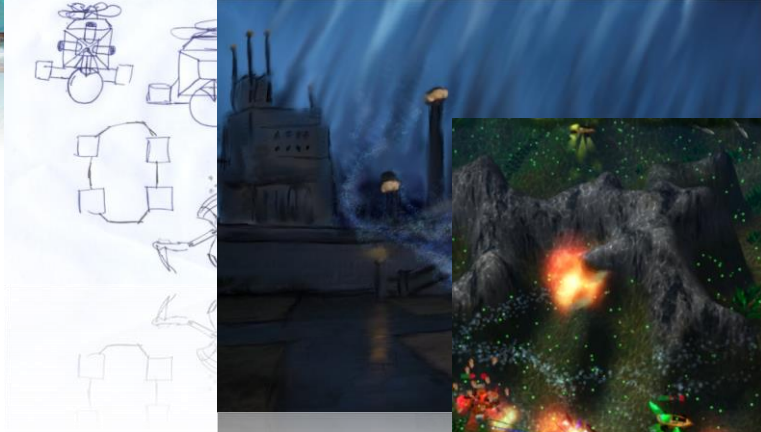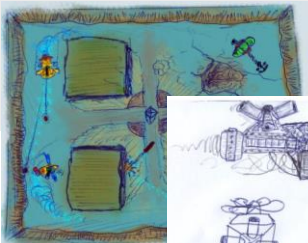
Book

http://www.gamedesignworkshop.com/

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Project Structure

Teams

- 3-4 Students per team
- Every member should contribute equally
- Considerations
  - Interests
  - Skills
  - Working hours
  - Meeting locations…

"Design & implement your game"

- But … that's very challenging!
- Detailed project management
  - Written project document
    - Actual idea/game documentation
    - Progress & timeline
  - Presentations / demos
  - Critiques, mutual feedback
  - Software engineering principles

Organization

- Project structure document (written by us)
- Detailed project notebook (written by you)

- All written documents in the course Wiki
- Written assignments due Mondays at 12:00
- Presentations in class

Iterative Design

- Keep game on track
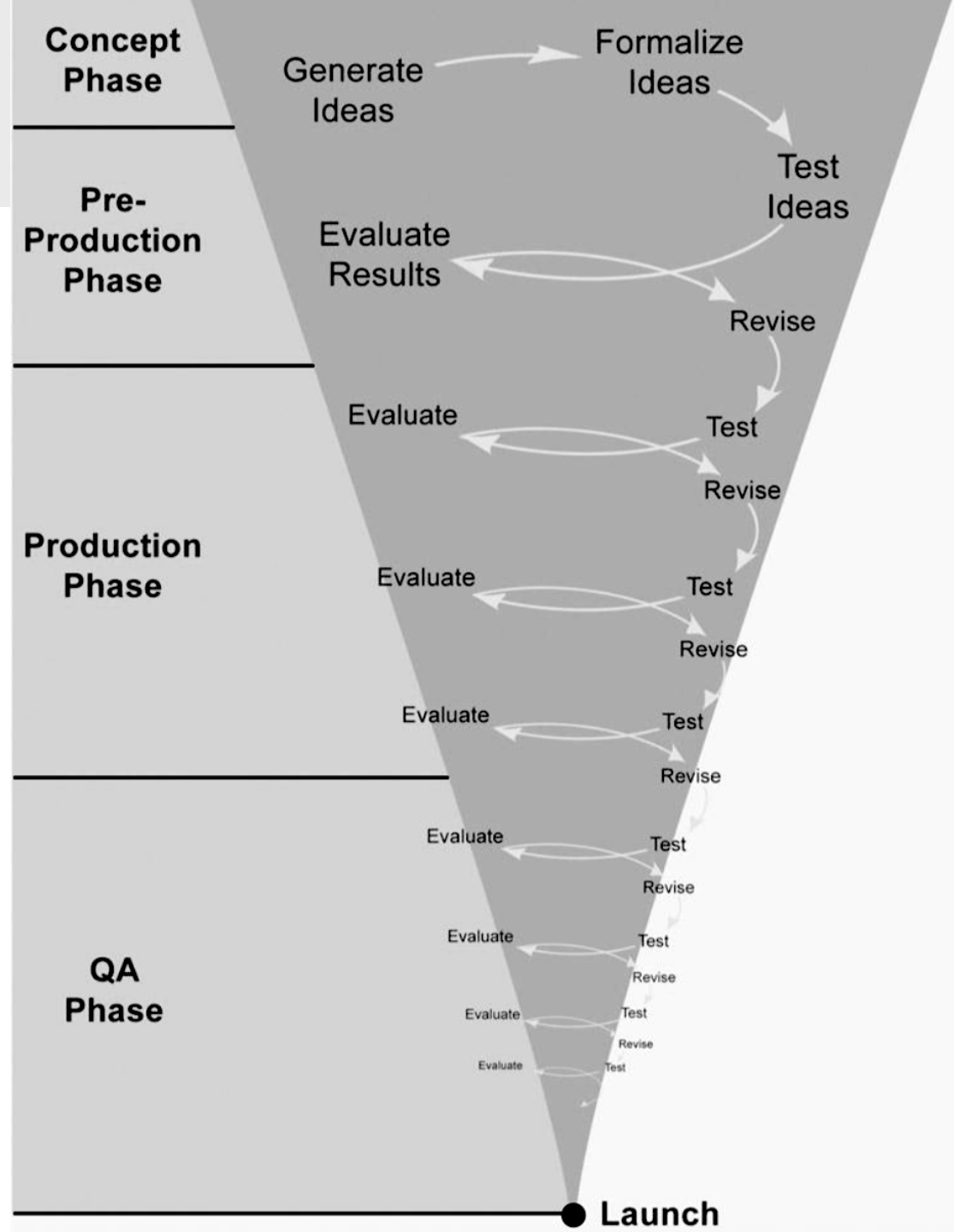
Concept Phase — Generate Ideas → Formalize Ideas → Test Ideas → Evaluate Results → Revise

Pre-Production Phase — Evaluate → Test → Revise

Production Phase — Evaluate → Test → Revise (repeated)

QA Phase — Evaluate → Test → Revise (repeated)

Launch

Milestones

1. Game idea pitch & formal proposal
2. Interim demo
3. Alpha release
4. Playtesting
5. Final presentation

See the Project Structure Document!

Milestone #1

- Game description
  - 1-3 pages (ca. 1500 words)
  - 3 pages sketches / mock-ups
  - Highlight design choices
- Development schedule
  - Layered task breakdown
  - Timeline & milestones
- Assessment
  - Strengths, appeal, criteria for success…

Development Schedule

Layer down your goals

- Functional Minimum
  - Just enough to call it a game…
- Your Low Target
  - The least possible to feel "ok"
- Your Desired Target
  - This is what you're aiming for
- Your High Target
  - If things go extremely well
- Your Extras
  - Things you know won't fit, maybe for later…

Development Schedule

Task	Description	Who	Hrs	Actual
1	Brainstorm design	All	4	8
2	Character modeling	Stan	12	26
3	Camera control	Kyle	6	
4	Prepare presentation	All	6	
5	Explosion effect	Kenny	12	

Development Schedule

Task	Wk1	Wk2	Wk3	Wk4	Part 3 Due	Wk5	Wk6	Wk7	...
1	A								
2		L	L						
3			T						
...									

Advice

Think Small!

- Do one thing well
- Make game stand out!
- Better than doing lots of stuff half-way

Big Idea Sheet

- Keeps project focused, common ground

Milestones

1. Game idea pitch & formal proposal
2. Interim demo
3. Alpha release
4. Playtesting
5. Final presentation!

Milestone Dates

- Kickoff lecture (April 12)
- Game idea pitch & formal proposal (Mai 8)
- Interim demo (Mai 29)
- Alpha release (June 19)
- Playtesting (July 3)
- Final release (July 17)
- Final presentation July 18, Game Day

Milestone Dates

- Game idea pitch & formal proposal **4w**

- Interim demo **3w**

- Alpha release **3w**

- Playtesting **2w**

- Final release … ca. **2w**

Project Structure Document

- Make sure to follow instructions
- Detailed deliverables
- Especially for milestones 1 & 2

Project Critiques

- Get feedback from "outsiders"
- Be constructive…
- Not used for grading!

Forming Groups

- If you already have a group - great…
  - Send me the team name, members names and student IDs

- If you don't have a team yet,
    - You may find one now
    - Or send me your name and student ID

- We will sign you into tumonline after the first three weeks

Platform

- No restrictions on development platform!
- But - technical contribution has to be clear
- If unsure, talk to us…

Game Theme

- 9 out of 10 designers agree:

"Narrowing focus and imposing limits expands creativity immensely."

- Starting point for visual design

- Avoid stereotypes & cliches

- Justify design decisions against theme!

Slender Man