Computer Graphics Project

MTAT.03.328
Fall 2021
Daniel Nael
### Organization

**3 credits course**

- **Contact hours**  \( 8 \times 2 = 16h \)  = 0.61 credits
- **Individual work**  62h  = 2.38 credits
  - Project idea  4h  = 0.15 credits
  - Project plan & timeline 12h  = 0.46 credits
  - Milestones 6 x 7h  = 1.62 credits
  - Expo 4h  = 0.15 credits
Organization

3 credits course
- Contact hours \(8 \times 2 = 16h\) \(= 0.61\) credits
- Individual work \(62h\) \(= 2.38\) credits
  - Project idea \(4h\) \(= 0.15\) credits
  - Project plan & timeline \(12h\) \(= 0.46\) credits
  - Milestones \(6 \times 7 h\) \(= 1.62\) credits
  - Expo \(4h\) \(= 0.15\) credits
Organization

- 21.09: Project Goals Presentation.
- 05.10: Milestone 1.
- 19.10: Milestone 2.
- 02.11: Milestone 3.
- 16.11: Milestone 4.
Organization

- 30.11: Milestone 5.
- 28.01 (14:00 - 18:00): Project Expo.
How to pass?

- Create a **project plan**.
- Set up and achieve your **own milestones**.
  
  Failing those, gets you a strike.  
  Do not get more than 3 strikes.

- Present the final result in the **expo + final video**.  
  Missing that is an automatic failure.
The Final Result

- Some kind of a demonstratable software
  - Standalone build

- Good project page
  - Clear milestone descriptions and pictures
  - Link to the final build
  - Link to the repo
  - Short video of the final build!
What to do?

Anything you want related to computer graphics.
What to do?

Extra practical work for a thesis
So your thesis will be 9+3 or 30+3 credits of work.
What to do?

Work on some pet project you already have. You are working on it in secret anyway, right?
What to do?
Continue a project from another course.
For example the CG course.
What to do?

Take on a new project and learn new things!
The CGVR Lab

cgvr.cs.ut.ee
For You!

- Good PCs
  - Walter, Torrance and Cook
    - Ryzen R9-3900X
    - RTX2080 Super

- Phong and Blinn
  - I7-6700
  - GTX 980 Ti
For You!

- Good PCs
- Multiple good monitors
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- Consultation
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- Many devices
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- Candy
INSPIRATION

Project Management

- **Milestone**
  - You can always change the plan.
  - A plan is better than no plan!

- **Plan should consist of:**
  - What do you want to have done?
  - General steps in what order you do things.
  - Required technologies (if applicable)

- **Plan should not consist of:**
  - Detailed descriptions of every milestone...
Milestone is a promise to a client of what will be done and working by the agreed time.
Project Management

- **Milestone**
  - What will be done in the next 2 weeks?
  - Specific research / content / feature / fix?

**Goals**

- Add a boss fight into the end of tutorial - (8h) ✓
  - Add boss movement pattern - (2h) ✓
  - Add a way for the boss to interact with the player (take and give damage) - (2h) ✓
  - Design a fighting place - (1h) ✓
  - Add a health bar to the boss - (1h) ✓
  - Add a sequence taking place after the boss fight - (1h) ✓

- Add the shooting mechanic as an upgrade sold in the store - (1h) ✓
Project Management

- Include the estimated
  - Research time
  - Debugging time

- How to do it? - 3h
- Doing it. - 1h
- Testing and fixing it. - 3h
Project Management

Make sure you stick to the goals you proposed!
- **Motivation**
  - So you want something done by the end?
  - **Do a little bit throughout the semester.**
  - Little bit means a new feature in 2 weeks.
Project Management

- Motivation
  - So you want something done by the end?
  - Do a little bit throughout the semester.
  - Little bit means a new feature in 2 weeks.
  - Does not have to be a big feature ...
  - ... but does have to work!
Project Management

- Clarity
  - State your milestone promise very clearly!
  - Present your milestone result very clearly!
    - On your page and during the milestone defense.
  - Few well-formulated bullet points is the minimum.
Project Management

- Project Page
  - Do not start updating your page in the session!
  - Update it the day before!

LUKE, YOU HAVE HOMEWORK FOR THE WEEKEND

NOOOOO!!!!
Project Management

- **Project Page**
  - Do not start updating your page in the session!
  - Update it the day before!

- Make it nice every time (not later):
  - Clear
  - Concise
  - Understandable
  - Easy to grasp
  - Quick to grasp
  - Illustrated with proper material
  - No grammar, spelling or formatting issues
Project Management

- **Result**
  - Make it good and working, no matter how small!
  - Instead of taking a too big goal to never reach it.
  - Engage people in the final expo!
Project Management

- **When in trouble:** ASK FOR HELP!
  - CGVR lab people (Ats, Jaanus, Madis and Raimond)
  - Fellow students
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- Do not restart or delete your project!
- Be positive!
  - Look for and present positive results!
  - Even if things look bleak.
Project Management

- **Reflection**
  - In the end you have implemented ~6 features
  - Compare it with your original project plan
  - Does not have to match
  - Think about how to continue...
Computer Science: MSc Practical Module

- **Goal:**
The goal of the module is to prepare the student for entering the labor market after graduation.
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  The goal of the module is to prepare the student for entering the labor market after graduation.

- **Learning outcomes:**
  After completing the module the student has acquired the basic practical skills to start work as a specialist, an entrepreneur or as part of the teaching staff.
Questions?
Your Project

- What do you call it?
- What is the main idea?
- Want a joint project with another student?