Lecture #00

Organisation

Computer Graphics
Winter Term 2020/21

Marc Stamminger

Modules

- This lecture: 3.75 ECTS (3 hours a week)
- Plus **"Basic Exercises"**
  - simple programming or theoretical exercises
  - effort about 2-3h / week
  - 1.25 ECTS

Module "CG-VU" 5 ECTS

- Plus **"Advanced Exercises"**
  - advanced programming exercises
  - effort about 5-6h / week
  - 2.5 ECTS

Module "CG-VUP" 7.5 ECTS

- 50% of the points of Basic Exercises → pass Basic part
- 50% of the points of Advanced Exercises → pass Advanced part
- Grade from **written exam**, probably in March/April 2021

Going Virtual

- **Lecture and exercises will be purely virtual this semester**
- **Lecture:**
  - **Videos** on fau.tv
  - **Computer graphics round table** via Zoom every Tuesday 16:00
- **Exercises:**
  - **Assignments Handout and Handin** via StudON
  - **Tutorials** via MS Teams, including chats for working groups
  - **Forum** in MS Teams: first place for questions

Jana Martschinke

Lucas Thies

Franziska Kranz

Dominik Penk

Daniel Zint

Links

- **FAU.tv: http://video.cs.fau.de**
  - Lecture Videos: …
- **StudOn: 5.Tech → 5.3 Inf → Inf9 → Computer Graphics**
  - Exercises handin and handout
- MS Teams
  - You need an MS Teams account
  - If you don't have one yet, go to: https://www.anleitungen.rrze.fau.de/medien/ms-teams/
  - Forum: **! First place for questions !**
- **https://lehre.lgdv.tf.fau.de/CG/Course**
  - Commented lecture slides, Demos from the lecture

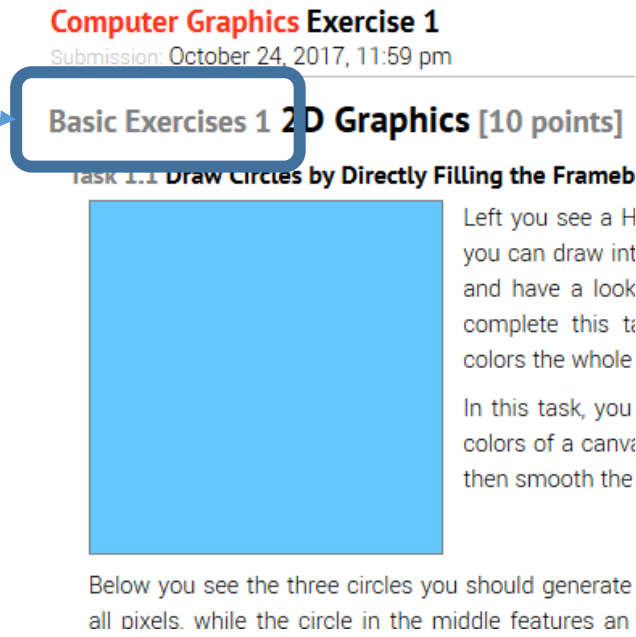
Semester Overview

- Lecture: 4h / week for 10 weeks
  - plus one exam preparation
- First tutorials **this Thursday!**

	Lecture #1	Lecture #2	Exercises
02.11.	Intro / Images / Colors	Rasterization, APIs	2D Graphics
09.11.	Line Rasterization	Polygon Rasterization	Rasterization
16.11.	GPU Rendering	Transformations	GPU Rendering
23.11.	Viewing and Perspective	Visibility	Projection & Blending
30.11.	Lighting	(Deferred) Shading	Lighting & Shading
07.12.	Texturing	Texture Aliasing	Texture Mapping
14.12.	Scene Graphs, 3D Rotations	Unity	Scene Graphs
11.01.	VR - HMDs	VR – Tracking & Latency	Unity
18.01.	Raytracing - Basics I	Raytracing - Basics II	Ray Tracing I
25.01.	Raytracing - Acceleration	Raytracing - AA, Ray Differentials, …	Ray Tracing II

Exercises

- One exercise sheet per week
- Both, Basic and Advanced Exercises
- Deadline Monday 2pm



- 10 Sheets, each sheet has
  - 10 points Basic
  - 10 points Advanced
- **For the 7.5 ECTS you have to do both, Basic and Advanced !**

- It is recommended (but not mandatory) to do the C/C++ Tutorium provided on StudOn in order to prepare for the assignments.

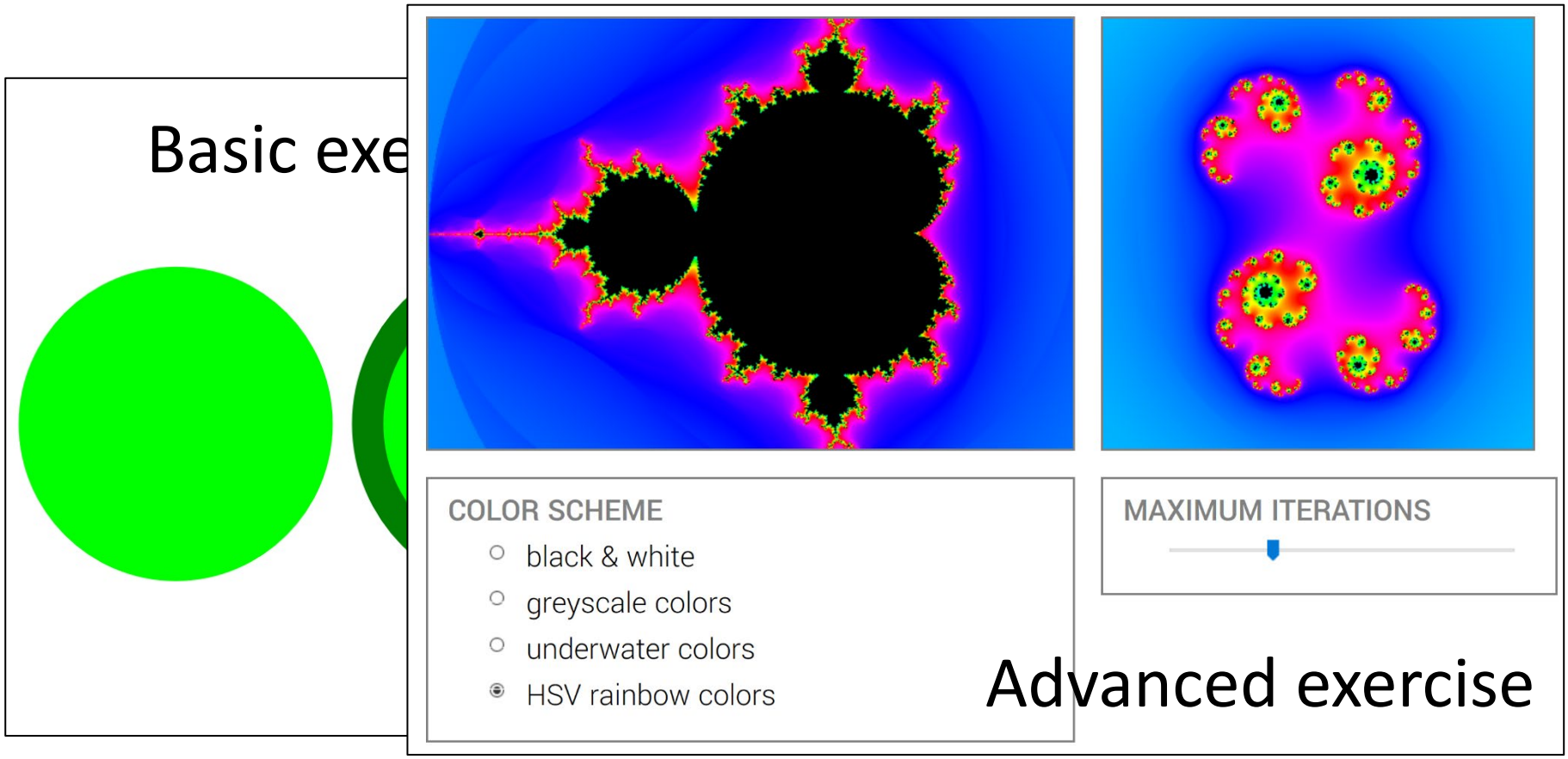
Weekly Plan

Monday	Tuesday	Wednesday	Thursday	Friday
new lecture videos, lecture slides, and exercise sheets online **14:00** - deadline for last week's exercises	**16:00** Computer Graphics Roundtable		**10:00-12:00** **12:00-14:00** **14:00-16:00** tutorials	

First Exercise

- First sheet is available

  → due **next week**



Further Questions ?