

559 DAY 1

9/4/01

WHAT IS COMPUTER GRAPHICS?

- The field
- The class

① Why are you here?

Do you know what you're getting into?

Do you know what you expect out of it?

② 3 questions for the day:

- what is graphics (the field)
- what is graphics (the class)
- who am I to tell you about it

③ What is graphics?

How we create pictures / images / video

OUTPUT IN GENERAL?

Communication in General? Yes/No

input / UI related to visual / geometric

Some other output modalities

- sound, haptics,

} VISUAL IS PRIMARY
COMMUNICATION
CHANNEL

VISUAL COMPUTING - PICTURES
GEOMETRIC COMPUTING - Shape

Where do we see graphics -

movies - Pearl Harbor, Shrek, FINAL FANTASY

TV, Video (real time, weather display,)

games, virtual environments, $\equiv$ approaching film
computer display (boring stuff)

CAD / Viz

$\equiv$ any picture (digital camera, image editing) ^{Web}

$\equiv$ any video (DV, digital transmission, spfx, digital editing)

③a

What does this mean you need to know?

- About Images (they are everywhere)
- About Geometry (important for lots of apps)
- About 3D (cause its cool, increasingly important)

NOT JUST HOW TO USE TOOLS, BUT UNDERSTAND
The science behind them (even if you never write one
yourself)

$\equiv$ Operating Systems Class

④

How we will teach it to you - (The CLASS)

NOT HOW TO USE TOOLS

How to WRITE PHOTOSHOP, NOT HOW TO USE IT

That said - will use tools, will help you understand

1-3

TOPICS (based on what you need to know)

- 1- Images (roughly $\frac{1}{3}$ of class) -
- 2- Geometry / Modeling (represent objects)
- 3- RENDERING (make pictures of objects)

START WITH END: How WE SEE

NOT WITH OTHER END (WHAT PICTURE DO YOU WANT TO MAKE = ART)

NOT AN ART CLASS

NOT GRADED ON ART ABILITIES

PLEASE TRY TO MAKE THINGS LOOK NICE

IS THIS CLASS HARD? YES

- get out what you put in
- not a spectator sport - have to learn by doing projects + math
- only class with both hacking and math
- diversity of ideas and concepts
- rapidly changing
topics in OS class about the same as 15 years ago
computer architecture? (same)
details change

CLASS MECHANICS

- LECTURES ARE IMPORTANT!

YOU ARE RESPONSIBLE FOR MATERIAL
DOOR IN FRONT PROBLEM
GETTING LOST PROBLEM

- ≡ DISTINGUISHED LECTURES

- WEB SITE - READ IT!

Announcements

Resources

- POLICIES - DRACONIAN - interested in graphics, not babysitting

- EXAM + 2 QUIZZES

YOU KNOW WHEN THEY ARE
Deal with missing them now

- 3 Projects - SIZEABLE

C++ (why)

FITK (why)

OpenGL

Learning to write big programs
vs. learning graphics

Lenient late policy - no handins after answers/hints
Demos

- 4 Programming Assignments

No late - do them tonight if you want
Project Mechanics - practice even if ungraded

- 4 written homeworks ≡ small (and small part of grade)
plus written surveys (not graded, but required)

- Program Policies

Hand-in, CSL computers, Completeness

Readings -

Do Them! (responsible, even if not discussed!)

No Single Text

READER

OpenGL book

Shirley book

GOING ABOVE AND BEYOND

No extra credit

Opportunities to show off

Programming Assignments

Open Ended Projects

About ME

I REALLY LIKE THIS STUFF

RESEARCH

Play GAMES / WATCH MOVIES

PART OF CG CULTURE

NEVER TOOK CLASS

No Interest until GRAD SCHOOL

BIO BITS

RESEARCH BIO

GRAPHICS GROUP