Introductions

- Instructor
  Parag Chaudhuri
  SIA-304, Kanwal Rekhi Building
  Office hours: Fix by email, Mention [CS475]//[CS675] in the subject line

- TA
  - Pratik Kalshetti, Ph.D., CSE
  - Safeer Afaque, Ph.D., CSE
  - Vaishali Shikya, M.Tech 2, CSE

Course Details
- Slot 10, Tue, Fri, 2:00pm-3:30pm
- www.cse.iitb.ac.in/~parag/teaching/2018/cs475
- Mailing list (CS475): cs475@cse.iitb.ac.in
- Mailing list (CS675): cs675@cse.iitb.ac.in
- Classroom: SIC-201

Eligibility
- Data Structures, Linear Algebra
- No Audits

What is Computer Graphics?

Ernest and Celestine, Les Armateurs, 2013

Bahubali 2, Arka Mediaworks and Tau Films, 2015
Digital and Print Media

Computational Photography

And the list goes on...
- Virtual Worlds – Google Earth, Second Life, Minecraft
- Algorithm Animation
- Typesetting and font design – LaTeX, Freetype
- Digital Video and HDTV
- Drug Design
- Image and Video Search

What is Computer Graphics?
- CG is the art and science of using the computer to make images.
- Study of methods (artistic, mathematical, algorithmic, software) and systems (mechanical, electronic, hardware) to create, control and manipulate pictorial data on the computer.

What is Computer Graphics?
- Forget the definitions!
- Remember why you are here.

Graphical User Interfaces

The Future?

What will we learn in the course?
Tentative course content
Drawing in 2D and 3D

Modelling
- Lines, Polygons
- Curves, Surfaces
- Modelling transformations
- Hidden Surfaces
- Viewing transformations

Rendering
- Shading
- Lighting models
- Texture mapping
- Ray Tracing

Animation
- Transformations
- Interpolation
- Keyframing

Course Structure
- Lectures, notes, textbook – see course webpage
- Make sure you are subscribed to the mailing lists.
- Programming Assignments – big ones.
- Announced Quizzes (Aug 29, Oct 17), Unannounced Quiz
- MidSem Exam (Sep 10 – 16)
- EndSem Exam (Nov 12 - 23)

Evaluation
- Everything is checked for plagiarism
  - Cite sources if you borrow (even if from your classmates/seniors).
  - Both parties get the same penalty.
  - At best, you will fail the course.
Grading

- Class Participation – 10%.
- Assignments, Demos, Vivas – 50-60%.
- Exams and Quizzes – 30-40%.

- Very low attendance – DX grade.
- If you plan to drop after the add/drop date – tell me.

Unsought Advice

- Attend classes – just the slides and book will not be sufficient.
- Do the assignments – plan early, don’t ask for extensions.
- If you do not understand something – ASK! Ask early, ask often.
- If what I am teaching seems irrelevant – ask why it is being taught.
- If you think I am teaching something incorrect – point it out.
  - If you do it often enough – correctly – you get a bonus!

Yay!

Let's begin!