COURSE SUMMARY

• affine transformations: change-of-basis, trans/rot/scale, composition
• view frustum, projection transformations, homogeneous coordinates
• explicit / implicit / parametric representations
• scan conversion, barycentric coordinates, interpolation using shaders
• clipping, view-frustum culling, back-face culling, occlusion culling, z-buffer visibility
• texture mapping, MIPMAPs, cubemaps, procedural textures
• Phong local illumination, raytracing
• shadow maps, ambient occlusion, photon mapping, path tracing
• WebGL: three.js + GLSL shaders
LEARNING MORE

• CPSC 424: Geometric Modeling
• CPSC 426: Computer Animation
• local conferences: Spark FX, Spark Animation
• ACM SIGGRAPH, SIGGRAPH ASIA, Eurographics, FMX
• online / books / projects / …
• Graduate School
FUTURE OF GRAPHICS

• 3D content creation by all
• easier & better capture:
  • omnidirectional, HDR, 3D geometry, mocap
  • computer vision
• machine learning
• VR/AR/MR
• computational design: connecting form and function
  • structural design of geometry; 3D printed materials
  • optics
  • mechanical mechanisms, robotics
FINAL EXAM

• Thu Dec 5, 8:30am, 2.5h: BUCH A201 (unofficial)
  • official: https://students.ubc.ca/enrolment/exams/exam-schedule
• covers all topics; slight emphasis on material since MT2
• closed book

• will post old final exams
• will post extra office hours
HAPPY HOLIDAYS !