Advanced Computer Graphics
(3 credit hours)
CSCI B581
Spring 2018

Some examples from previous semesters:
* B581 Spring 2017
* B581 Fall 2014

(note: in previous semesters, the course was based on several different platforms than it will be in Spring 2018)

In Spring 2018: 3D & 2D Computer Graphics Programming with OpenGL ES on iOS

OpenGL ES is a shader-based API using the GLSL programming language to write GPU-run code.

Supported platform for Spring 2018 semester:
OpenGL ES 3.0 API,
written in GLSL (GPU-side shader code)
and Swift (CPU-side application code)
for iOS.
(*) bringing your own device is not required: you may complete B581 just as successfully by writing and running the same graphics programs on iOS simulators that run on STC lab computers.

Instructor:
Mitja Hmeljak, mitja@indiana.edu

Prerequisites:
Required:
[CSCI-C 343 and (MATH-M 301 or M 303)],
or equivalent experience:
data structures & mathematics for vectors and matrices
Recommended:
[CSCI-C 212 and a working knowledge of a C-like language],
or equivalent programming experience.

Textbooks:
TBA

Course Description
Introduction to graphics hardware and software.
Two-dimensional graphics methods, transformations, and interactive methods.
Three-dimensional graphics, transformations, viewing geometry, object modeling and interactive manipulation methods.
Basic lighting and shading.
Video and animation methods.
Credit not given for both B581 and B481.