

CMSC 437 Graphical User Interface Programming

Monday, Wednesday 6:00-9:00

First class Wednesday June 1, 2016

in ENG 122 computer lab ??

WWW access <http://www.csee.umbc.edu/~squire>

**We meet Mon, Wed, lecture and you
demonstrate**

**your homework and projects. You use the web
pages**

**on your own schedule to learn the rest of
the material.**

**Get text book and/or reference material for
the programming language and graphics tool kit
you want to use for homeworks and project**

Grading Policy

Distribution

Quiz 1 + Quiz 2	24%
Final Exam	16%
Project	30%
Homework	30%

Course grade

A	90% - 100%
B	80% - 89.9%
C	70% - 79.9%
D	60% - 69.9%

UMBC rules apply to cheating/copying.
You may work together and discuss homework and the project.
You must do your own work and not copy from anyone else!
Copying/cheating will result in a minimum punishment of a zero on that assignment for everyone involved.
You are allowed to get a "starter" application and build your project. You are allowed to use toolkits and cut-and-paste sections of code. Your work has to be significantly different from classmates and existing open source works.

Computer usage

You need access to `linux.gl.umbc.edu` or some other GL machine

All students must have an account on the UMBC gl machines.
The projects and some homework will use the "submit" mechanism.
All students must be able to access the WWW to get assignments.
Use `ssh -Y your-id@linux.gl.umbc.edu` connection for remote use.

Bring your wireless laptop to class if you wish.

Your own machine may be easier for you to use than the lab computer.
You can download and test and demonstrate easier on your own machine.
Project and homeworks are presented and demonstrated in the classroom.
You may use your own computer. (You need VGA connector for project.)

Lab to your GL files:
double click on virtual icon
double click on rhel6.6
click on system tools, click on terminal
When terminal comes up, `ls` you should see your files.

**Class motto: If it works, use it.
If not, find another way.**

[Make it work](#)

Jon Squire, Instructor, office hours:

Wednesday before and after class
and by appointment ITE 226
EMail: `squire@umbc.edu`

We will cover information on User Interface

The user interface includes visual and sound output.
The user interface includes keyboard, mouse, touch, multi-touch input.
Human reaction times and visual cues, 3D.

Style, conventions and standards differ with application.
And creating and using optical illusions.

[sample motion and sound](#)

Application of User Interface

- 1) desktop, labtop, tablet computers
 both application and web interface
 Windows, Mac OSX, Unix, Linux differences
- 2) game consoles
 Wii, Playstation 4, XBox 1
 game controllers
- 3) cell phones
 touch methods, size, speed, resolution
- 4) Automotive, aircraft "glass cockpit", now cars
 replacing traditional instruments with a display
- 5) RPV, remotely piloted vehicle, quad-copters
 flying over Afghanistan from Colorado
 news videos
- 6) Internationalization
 marketing around the world
- 7) real 3D displays
 cameras, games, TV, graphics

[We will cover \(syllabus\)](#)

[Lecture 1](#)

This course is updated every time it is taught.

Do not work more than two lectures ahead.

Course links

- [Syllabus - class dates and subjects, homework dates, reading assignments](#)
- [Homework assignments, Quiz info - the details](#)
- [Projects -](#)
- [Partial lecture notes, one per page](#)
- [Partial lecture notes big page for printing](#)

- [Downloadable samples, source and executables](#)
- [UTAH graphics format, examples, source code](#)
- www.opengl.org OpenGL WEB site
- [HTML of man pages for OpenGL GL, GLU and GLX](#)
- [my website HTML5 canvas examples](#)

Many web sites on Java GUI, AWT, Swing, etc.
Many web sites on Python wx, tk, qt, etc.

Student Academic Integrity

"By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are to be held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory."