ICS 161: GAME ENGINE LAB (36860)

Lectures M W F 3:00-3:50pm in SSL 290.

Labs Wednesdays at 9:30-10:50am, 12:00-1:20pm, 4:00-5:20pm, 5:30-6:50pm in the COGS lab, ICS-2 room 170.

Instructor: Dan Frost frost@uci.edu Office hours: TBA.

TA: Phani Shekhar Mantripragada pmantrip@uci.edu.

Required text"book": Game Programming Patterns, by Robert Nystrom. Available on paper at Amazon, http://www.amazon.com/dp/0990582906. Available online and in other formats as well, see http://gameprogrammingpatterns.com/ for more information. Buying the printed version is entirely optional.

ICS 161 focuses on the principles and design of game engines. The educational goals of this course include:

1. Becoming reasonably knowledgeable about the design and development of a game engine by building one on top of SDL2 (https://www.libsdl.org/).
2. Gaining experience understanding and developing a medium to large C++ application: advanced C++ features, Visual Studio ins-and-outs, debugging, version control, linking and external libraries, how to read the docs, etc.
3. Learning about designing and programming game engines and other medium to large C++ applications – reading source code, understanding design choices, recognizing and using common patterns, adding new functionality, integrating with libraries/engines.

The course does *not* cover big fancy 3D game engines, such as Unity, Unreal/UDK, or Source.

Grading: Grades will be based on the student's overall average, using a straight scale (90s are As, 80s are Bs, etc.; subject to minor change). The overall average is based on weekly assignments (65%), several tests (but no final exam) (25%), and attendance at lectures and discussions (10%).

Late policy: Contact the TA by email, *in advance*, for excused late work. Late assignments will lose 1% (of the full score) per hour late; assignments will not be accepted more than one week after the due date.

Add, drop, change grade option: According to UCI policy, a student can, without instructor permission, add, drop or change the grading option through Friday, January 15. Students adding after January 4 should contact Prof. Frost in advance.

Academic honesty: A single instance of academic dishonesty will result in a grade of F for the course and a letter in the student's file. The simple rule to follow: do not claim anyone else's words, ideas, or computer code as your own; if in doubt, discuss with Prof. Frost.

Prohibited during lectures and lab meetings: use of cell phones, laptops, iPads, iPods, and anything similarly enjoyable and distracting for any function not directly related to the course; eating or drinking. Exceptions may occasionally be announced.

Keep in touch: Check the course web page and your email (UCInetID account) frequently. Please feel free to send email to the course staff: put **ICS 161** at the beginning of the subject line, and your name in the message body. You are welcome to ask Prof. Frost to add a non-@uci.edu email address to the course mailing list.

Special accommodations: Any student who feels he or she needs an accommodation based on the impact of a disability should contact Prof. Frost privately to discuss his or her specific needs. Also contact the Disability Services Center at (949) 824-7494 as soon as possible to ensure that such accommodations are implemented in a timely fashion.

Coloring outside the lines: We're swimming in the deep end, so you can dive as far down as you want. The options most supported are those in the COGS lab, and include SDL 2.0.3, C++, Microsoft Visual Studio 2013, 32-bit targets, NVIDIA GPUs, and Windows 7. Talk to course staff before wandering too far off the path, and before mixing metaphors.