# CMSI 371-01

## COMPUTER GRAPHICS

**Spring 2013**

## Assignment 0502 Feedback

### Andrew Kowalczyk

*2c* — You have not yet done lighting computations as of the assignment deadline. (**O**)

*2d* — You were in class to hear me talk about clipping and hidden surface removal. Yay! (**+**)

*3e* — You have made good progress in terms of your scene's interactivity, but at the cost of not yet getting to shader changes with respect to lighting. (**O**)

*4a* — Your overall functionality has been progressing well, but not in the area specified by this assignment. Thus, this necessarily remains unevaluated. (**O**)

*4b* — Your separation of concerns has improved to the point where you are closer to doing dynamic updates to your clock model without having to recreate it all the time, but as mentioned that is more of an overall aspect and not the focus of this assignment. (**O**)

*4c* — Same as in *4a* and *4b*… (**O**)

*4d* — Same here again…will wait on lighting for this. (**O**)

*4e* — You've kept up your good commit habits here, even though those changes have not involved lighting. For this one, I am confident that you will continue to do well when you do focus on doing lighting calculations, so I am OK with issuing a proficiency. (**+**)

*4f* — Not submitted on time. (**–**)

**Updated feedback based on commits up to May 11:**

*2c* — You have successfully integrated diffuse lighting computations from the sample code into your scene. This was done correctly; ideally the specular calculation should be integrated also. (**|**)

*3a* — Although not specifically part of this assignment, you did clean up the dynamic aspects of your scene: clock rotation, automated updates. The automated updates have efficiency issues, but they still work as intended. This justifies an increase for this outcome. (**+**)

*3d* — Revisited although not specifically in this assignment: you are still missing a unit test for your instance transform function, get your camera function unit test errors out. So we can't max this one out. (**|**)

*3e* — Specular lighting would expand your fragment shader beyond the trivial "set color" version, and with this outcome pertaining to advancement in shader programming, that keeps things from maxxing out. (**|**)

*4a* — Your code is overall functional and correct, and fulfills the baseline functionality expected for this course. At this closing stage, loose ends are those mentioned in *4b* and *2c*/*3e*. These aren't dealbreakers, but they do still represent some incomplete coverage of work that could have been done. (**|**)

*4b* — Separation of concerns is shown with your definition of a self-contained `Clock` object, which is good. However, this outcome is negatively affected by the suboptimal update code. Your `clockWebGL` function returns *almost entirely the same object*, except for the transforms on the clock hands (nudge nudge hint hint). A consequence of this implementation choice is that you are obligated to call `vertexify` for every single update. When you hit upon the cleaner update approach, this will become unnecessary. Both factors contribute to lack of scalability and performance slowdowns. (**|**)

*4c* — Your code is overall quite readable. One thing that sticks out is your inconsistent use of `GL` vs. `Gl` in your function suffixes. Pick one and stick with it. (**+**)

*4d* — For this go-round, you successfully integrated diffuse lighting from the sample code based on the information given. Plus you largely solved the issues with clock updates (although not optimal, as mentioned; but it still works), rotation, and transforms. Nicely done. (**+**)