**Totals** 

10

0

0

| 9          | Outcomes  | HW<br>0129 | HW<br>0212 | HW<br>0226 | HW<br>0319 | HW<br>0326 | HW2<br>0326 | HW<br>0404 | So Far |
|------------|---|------------|------------|------------|------------|------------|-------------|------------|--------|
| 1          | Represent, model, and create visual information digitally.                          |            |            |            |            |            |             |            |        |
| 1a         | in terms of pixels and geometric primitives.  |            | +          | +          |            |            |             |            | +      |
| 1b         | in terms of polygon meshes: vertices, edges, and faces.                             |            |            |            | +          |            |             |            | +      |
| 1c         | as a composition of multiple discrete objects (scenes).                             |            |            |            | -          |            |             | +          | +      |
| 2          | Manipulate and display visual information in 2D and 3D.                             |            |            |            |            |            |             |            |        |
| <b>2</b> a | Apply transforms to 2D and 3D objects.  |            | -          |            |            |            |             | +          | +      |
| <b>2</b> b | Project 3D objects onto a 2D viewport.  |            |            |            |            | /          | 1           | +          | +      |
| 2c         | Perform color and light computations.   |            |            | /          |            |            |             |            | /      |
| <b>2</b> d | Perform clipping and hidden surface removal (HSR).                                  |            |            |            |            |            |             |            |        |
| 3          | Use and develop computer graphics APIs in both 2D and 3D.                           |            |            |            |            |            |             |            |        |
| 3a         | Animate scenes in 2D and 3D.  |            |            |            |            |            |             |            |        |
| 3b         | Implement 2D graphics primitives such as line segments, circles, and polygon fills. |            |            | +          |            |            |             |            | +      |
| 3c         | Perform bit-level color manipulation.   |            |            | -          |            |            |             |            |        |
| 3d         | Develop a library of geometric primitives, operations, and matrix transformations.  |            |            |            | ı          | ı          |             | ı          |        |
| 3e         | Render a 3D scene using programmable shaders.                                       |            |            |            | I          | I          |             | I          |        |
| 4          | Follow academic and technical best practices throughout the course.                 |            |            |            |            |            |             |            |        |
| 4a         | Write syntactically correct, functional code.                                       |            | +          | +          | +          |            | +           |            | +      |
| 4b         | Demonstrate proper separation of concerns.  | +          | +          |            | +          |            | +           | +          | +      |
| 4c         | Write code that is easily understood by programmers other than yourself.            | I          | I          | +          | +          |            | I           | I          |        |
| 4d         | Use available resources and documentation to find required information.             | +          | +          | I          | +          | +          |             | +          | +      |
| 4e         | Use version control effectively.  |            | I          | /          | +          | +          |             | +          |        |
| 4f         | Meet all designated deadlines.  | +          | +          | +          | +          |            |             |            | +      |