**Totals** 

1	Outcomes	HW 0129	HW 0212	HW 0226	HW 0319	HW 0326	HW 0404	HW 0418	HW 0502	HW2	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.				Ι					+	+
1c	as a composition of multiple discrete objects (scenes).				/		- 1	-		-	1
2	Manipulate and display visual information in 2D and 3D.										
<b>2</b> a	Apply transforms to 2D and 3D objects.		1			I	+	+			+
<b>2</b> b	Project 3D objects onto a 2D viewport.					I	_			+	+
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.										
<b>3</b> a	Animate scenes in 2D and 3D.		1				I	+			+
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.				/	I	ı			ı	I
<b>3e</b>	Render a 3D scene using programmable shaders.				1	-	-	-	+		+
4	Follow academic and technical best practices throughout the course.										
4a	Write syntactically correct, functional code.	+	+	1	/	+	I	+	1		I
4b	Demonstrate proper separation of concerns.		+	+	+	/		+	+		+
4c	Write code that is easily understood by programmers other than yourself.	+	ı	+	+	I	I	+	/	ı	+
4d	Use available resources and documentation to find required information.	+	+	+		+	+	+	+		+
4e	Use version control effectively.	+	+	+	+	+	+	+	+		+
4f	Meet all designated deadlines.	+	+	+	+	+	+	+	+		+

<sup>\*</sup> Cumulative re-review of code cleanup, recursion, projection, and polygon meshes.