Unit 0 Reading (due Sunday, January 13)

Please let the instructor know immediately if you have trouble accessing any of these materials. There is nothing to turn in for your reading, but you will be expected to be comfortable with these concepts by your first quiz.

Required Reading:

Read the Syllabus: **CS4731_Syllabus.pdf (https://canvas.wpi.edu/courses/12400/files/1704761/download?wrap=1)**  **(https://canvas.wpi.edu/courses/12400/files/1704761/download?wrap=1)**

Your WPI login may be required to access both texts listed below. If you get a pop-up window that says "Get instant access through your library", just enter your WPI email address. Otherwise, click "Sign In" in the upper right-hand corner and log in with your WPI email address and password.

Computer Graphics Through OpenGL, Chapter 1 (https://www.safaribooksonline.com/library/view/computer-graphics-through/9781482258394/K24133_C001.xhtml) - Please read to the end of section 1.1. You can ignore the rest of the chapter. This just provides a brief overview and history of computer graphics.

If you are having trouble accessing the text, please open up **this link (https://wpi.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma9936735273004746&context=L&vid=01WPI_INST:Default&search_scope=MyInst_and_CI&tab=Everything&lang=en)** and follow the instructions shown in **this video (https://video.wpi.edu/Watch/d9KLc43H)** (no audio).

Introduction to Computer Graphics, Chapter 1 (https://www.safaribooksonline.com/library/view/introduction-to-computer/9781439852798/K12432_C001.xhtml) - Please read the entire chapter except for subsections 1.2.2.1 (CIE XYZ), 1.2.2.4 (CIELab), and 1.2.3 (Illuminant). Some of this will be familiar, and some of it will likely be new. We won't be relying too much on the particular equations in this chapter, so don't get too hung up on them. However, please see if you can gain a basic understanding of them, as they help reinforce the chapter concepts. I recommend reading this after watching the required videos below.

If you are having trouble accessing the text, please open up **this link (https://wpi.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma9936729551204746&context=L&vid=01WPI_INST:Default&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,introduction%20to%20computer%20graphics%20pattanaik&sortby=rank&offset=0)** and follow the same instructions shown in the video for the previous book.

Required Viewing:

These short videos provide a basic overview of bitmaps, vector graphics, and color theory, which are important concepts for you to know at the beginning of this course. I originally created these videos for a 2000-level digital media class at another institution, so you can ignore any mention of logistical class details such as "semester plans".

Please choose either the SD or the HD version depending on your bandwidth. Due to some technical problems with the WPI video hosting service, I have to provide separate links to each version. Hopefully, this should be fixed soon.

HD	SD	Runtime (min)
Vector Graphics (HD) (https://video.wpi.edu/Watch/s4YMe63G)	Vector Graphics (SD) (https://video.wpi.edu/Watch/Bs4r5D8H)	*6:00*
Bitmap Graphics (HD) (https://video.wpi.edu/Watch/Jw7a3ZSf)	Bitmap Graphics (SD) (https://video.wpi.edu/Watch/d8Q2DzSb)	*7:53*
Bitmap vs Vector Graphics (HD) (https://video.wpi.edu/Watch/Zd28ReSc)	Bitmap vs Vector Graphics (SD) (https://video.wpi.edu/Watch/p6FGq29X)	*5:10*
Color Theory, Part I (HD) (https://video.wpi.edu/Watch/c4G8SaBk)	Color Theory, Part I (SD) (https://video.wpi.edu/Watch/Gy85EpSn)	*3:37*
Color Theory, Part II (HD) (https://video.wpi.edu/Watch/Yc2i7E6P)	Color Theory, Part II (SD) (https://video.wpi.edu/Watch/b7E4Hiq9)	*10:19*
Color Theory, Part III (HD) (https://video.wpi.edu/Watch/Fe47PkYt)	Color Theory, Part III (SD) (https://video.wpi.edu/Watch/Ab25TnJz)	*5:48*

Optional Viewing:

This class assumes you are comfortable with binary and hexadecimal numbering systems. If you need a review, though, please check out the videos below:

HD	SD	Runtime (min)
Numbering Systems, Part I (HD) (https://video.wpi.edu/Watch/Yr6i4SAy)	Numbering Systems, Part I (SD) (https://video.wpi.edu/Watch/Yx57Rdo3)	*10:05*
Numbering Systems, Part II (HD) (https://video.wpi.edu/Watch/Hd7y4RGt)	Numbering Systems, Part II (SD) (https://video.wpi.edu/Watch/Ca3f6JZk)	*5:45*
Numbering Systems, Part III (HD) (https://video.wpi.edu/Watch/g5H6Yrn2)	Numbering Systems, Part III (SD) (https://video.wpi.edu/Watch/Mc63Bia7)	*5:03*

This class also assumes that you are comfortable with designing programs and writing clean, professional code. The following videos provide a refresher on these topics:

Program Design 101 (https://video.wpi.edu/Watch/Pf65WmDd) *(7:47)*

Coding Practices Review (https://video.wpi.edu/Watch/m2E7KyYx) *(7:29)*