

CSE 20

Beginning Programming in Python

Programming Assignment 1

In this assignment, you will write a Python program that computes the volume and surface area of a sphere whose radius is entered by the user. If you don't know the formulas for spherical volume and surface area, you can find them at:

<https://courses.lumenlearning.com/prealgebra/chapter/finding-the-volume-and-surface-area-of-a-sphere/>

Emulate the examples `Rectangle.py`, `Circle.py`, and `Box.py` posted in the Examples section of the course webpage. Call your Python script `Sphere.py`. A sample session with the program appears below.

```
$ python Sphere.py
Enter the radius of the sphere: 2.3
The volume is: 50.965010421636
The surface area is: 66.47610054996001
$
```

Format your input and output so that your program reproduces the above session *exactly*, even down to capitalization, punctuation and spacing.

Every program you submit in this class (including this one) should begin with a comment block resembling the model below.

```
# your name
# your CruzID@ucsc.edu
# programming assignment 1
# a short (one or two sentence) description of what the program does
```

Test your program thoroughly, verifying the results by hand if necessary. Upload your file `Sphere.py` to the assignment pa1 on Gradescope before the due date.