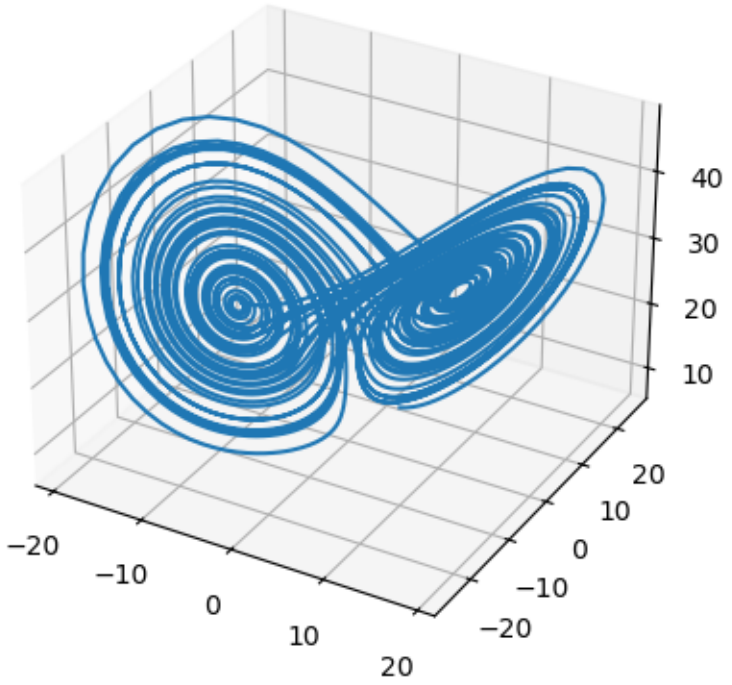
ASSIGNMENT5

February 27, 2025

[11]:
```
import numpy as np
import matplotlib.pyplot as plt

sigma=10
beta=8/3
p=28

x=((np.random.random())*20)-10
y=((np.random.random())*20)-10
z=((np.random.random())*20)-10

allx=np.array(np.zeros(5000))
ally=np.array(np.zeros(5000))
allz=np.array(np.zeros(5000))


for t in range(5000):
    chx= 0.01*(sigma*(y-x))
    chy= 0.01*(x*(p-z)-y)
    chz= 0.01*((x*y)-(beta*z))
    x = chx+x
    y = chy+y
    z = chz+z
    allx[t]=x
    ally[t]=y
    allz[t]=z

fig=plt.figure()
ax=fig.add_subplot(projection='3d')
ax.plot(allx,ally,allz)
plt.show()
```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