```
import numpy as np
import matplotlib.pyplot as plt

# Parameters
frequency = 2400 # MHz (2.4 GHz WiFi)
distances = np.linspace(0.1, 20, 100) # km
# FSPL calculation
fspl = 20*np.log10(distances) + 20*np.log10(frequency) + 32.44
# Plot
plt.figure(figsize=(8,5))
plt.plot(distances, fspl, color ='green', label="FSPL at 2.4 GHz")
plt.xlabel("Distance in Kilometers")
plt.ylabel("Path Loss (dB)")
plt.title("Free-Space Path Loss vs Distance")
plt.grid(True)
plt.legend()
plt.show()
```