Hardware

Servers could be used, instead of routers (Campus Area Network)

Those servers need to support up to 5GHz to ensure a healthy connection

Hardware would be needed to create multiple access points

The connection must be wireless to ensure mobility, however wired is always compatible

Software

Program that can tell you if bandwidth is currently limited

Software might be needed to detect nonstudent users

Software that can report the real time traffic on a specific network (similar to how Google can tell you how crowded a gym or restaurant is at the time or how crowded it should be)

Software that could detect malicious devices (firewall)

Accessibility

Apps that the university uses need to be accessible with the network

The range will need to be wide enough to work outside of some buildings. Like study areas outside cafes

Each building could have its own network to control bandwidth

Something to allow those with disabilities to assist connecting to the internet but to notify when the user is out of range

Delegation (leadership)

Admins could be University personnel or hired employees

Admins could monitor the firewall of the network

Admin passwords could be set up to those with authority

Specific admin passwords could be changed monthly to ensure total security

Miscellaneous

The username and pass must be easy to remember, so students shouldn't worry about correct login info

Buildings that have more devices attached could be able to access a higher percentage of the total connection. A computer lab will need more bandwidth than an art room.

Keeping the hardware and software up dated will improve overall performance

A.I monitoring that could ask/ answer questions relating to the internet? (like a help bot) No idea if this is a thing - just a idea