# Designing small spaces: Dorm room of the future

Description:

Oklahoma State University is in the process of constructing new dorm room buildings for college students. These new buildings are being constructed along Hall of fame Avenue in Stillwater, OK. Based on the floor plan of a two-person dorm room below propose an innovative solution of the future dorm room for new generation college students.
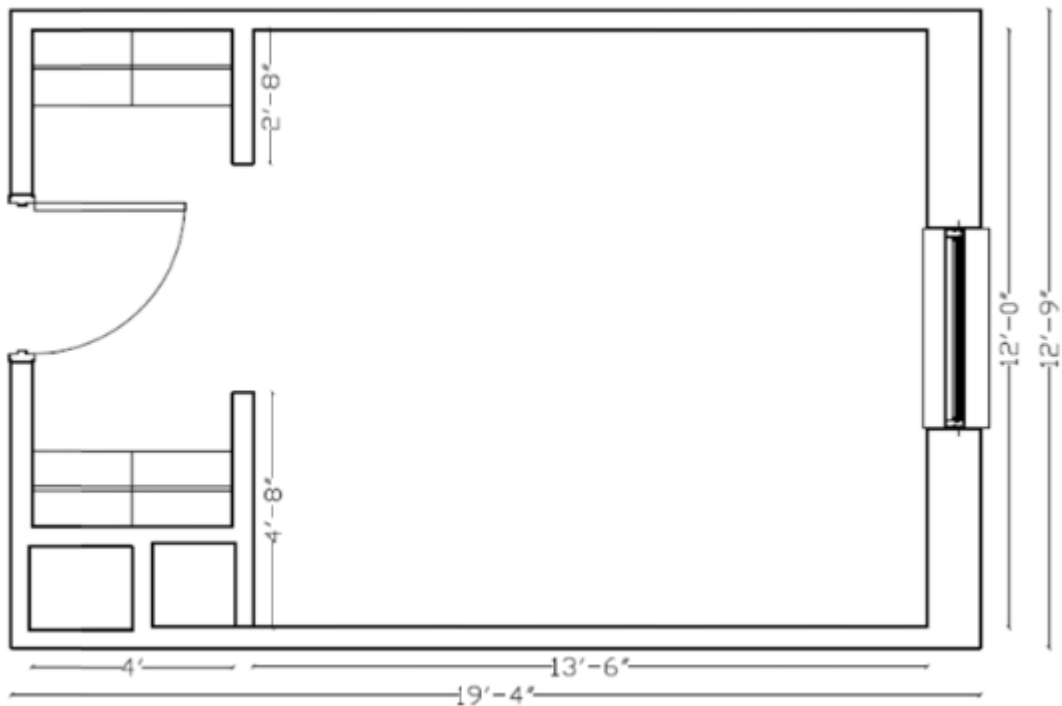
You have the freedom to decide what kind of furniture to include. Please download furniture as instructed through 3D warehouse.

Step 1: Create the floor	• Select **shapes tool**; pull down arrow and choose rectangle • Place cursor on origin • Click and move cursor slightly on the green axis • Type 19'4",12'9" • Press return on keyboard • Make sure your room is in landscape	
	• Select **orbit tool** to position your drawing • The drawing should be in landscape	
Step 2: Create exterior wall	• Select **offset tool** • Click on outer line • Move slightly towards inside of room • Type 9" • Press return on the keyboard	
Step 3: Create closet wall	Closet wall: Side A • Select the **lines tool** • Click on interior wall at left bottom corner and move cursor slightly along red axis • Type 4' • Hover your cursor to find endpoint • Draw a line across room to interior wall • Press return on the keyboard	
	Closet wall: Side B • Select the **lines tool** • Position cursor at 4' endpoint • Move cursor slightly on red axis • Type 9" • Click to complete line • Draw a line across room to interior wall • Press return on the keyboard	
	Remove closet edges • Select **erase tool** • Erase small segments between closet and room	

Step 3: Create a closet doorway	• Select the **select tool** • Highlight the closet floor; right click and choose erase • Highlight the room floor; right click and choose erase	
Step 4: Create bottom closet line	• Select the **lines tool** • Click wall between closet and room: Move cursor along green axis • Type 4'8" • Press return on keyboard • Find line endpoint (green circle) • Draw small segment across wall and click to complete	
Step 5: Create top closet line	• Select the **lines tool** • Click wall between closet and room: Move cursor along green axis • Type 2'8" • Press return on keyboard • Draw small segment and click to complete wall and create door opening	
	• Select the **select tool** • Highlight floor space; right click and choose erase • Highlight door opening; right click and choose erase • Highlight door lines; right click and choose erase	
Step 6: Create outer doorway	• Select the **lines tool** • Draw line from bottom closet doorway to exterior closet wall • Click to complete line • Select the **lines tool** • Draw line from top closet doorway to exterior closet wall • Click to complete line	

Step		
Step 7: Remove floor space and extra wall lines	• Select the **select tool** • Delete all floor space; right click and choose erase • Delete extra lines to make two door openings; right click and choose erase	
Step 8: Raise walls	• Select push/pull tool • Click the wall; raise slightly and type 9′ • Press return on keyboard	
Step 9: Create floor	• Select **shapes tool**; pull down arrow and choose rectangle • Begin in one corner and drag across to the opposite corner to create floor	
Step 10: Furnish your room!	• Access 3D warehouse • Search for furnishings • Insert into SketchUp	
Using VR	• Click on the Enscape icon which will open Enscape and you can navigate the model using the mouse • If you have a VR headset, you can view the model in immersive VR.	
Using AR	• Go to File>Export> and export as a .3ds model • Open BuildAR • Select> Use Black square ARtoolkit Marker • Click video> Select the webcam on the computer • Right click on markers and select "add marker" and navigate and find the "Kanji.patt file" • Right click on "kanji" and select "add 3d model" • Double click on the 3d model, Navigate and select where you saved the .3ds model • Use the QR code that was shared and print it. Now aim it towards the camera	
3D printing	• Install the STL plugin (if using the desktop version) and select export STL file • If using the web version/Free version, export STL file	

	• The STL File can be converted into a file formate that is accepted by 3D printers. For example, Ultimaker uses .gcode, and the STL file can be converted using the free CURA software.	