Attach a neatly hand drawn concept sketch (3D isometric) of your design. Identify all of the components on the sketch with a unique name or number. Include preliminary layout dimensions. Also show preliminary sketches of connections.

State the load specifications that will be used for the design and provide justification for these values. Identify the applicable standards. Clearly identify supports and how they are modeled. Draw the FBD of each primary component and connection showing all applied forces and reaction forces. Consider the possibility of there being multiple loading conditions that will necessitate multiple FBDs for a single component.