For my part of the project, I was to design the x-axis components, transforming it to CNC from mechanically controlled. This involved:

* Calculating distances and parameters for each components reach to fulfil the 210mm workspace requirements
* Designing components to support necessary parts, such as the bracket for the ball screw and support bracket for the motor
* Adjusting already existing components in order for other parts to comply with the machine. For example, in order for the slide to reach the required distance, I had to improvise and place the ball screw under the slide. Doing so created another problem with clearance, which was solved by machining the underside of the slide.
* Consulting with Ross with parts that need to be machined. One part in particular was the motor support. My current design at the time was focused on the supporting as large load which was unnecessary, as the machining would be more time/material consuming than necessary

The result of the transformation was a success (in Inventor at this stage), as everything fits and works nicely with other components of the lathe.

