

Mechanism Design Project

(11% of course grade)

You are to design a 4-bar mechanism that is capable of turning the pages of a book for a disabled person. The individual can depress a foot pedal, but is unable to use his or her arms. The picture shown below can be used to help you design the device. As the coupler link moves from C1, to C2, to C3, a single page turns, and then the cycle repeats.

Ground pivot points, A_o and B_o , have been determined and are shown on the figure.

Submit the following:

- A scaled drawing of the 4-bar in all three positions (one drawing)
- A scaled drawing of the 4-bar with all link dimensions shown (design position only). Also, indicate all appropriate angles and reference angles from the ground link on the same drawing.
- Show the entire coupler path on a plot
- Submit a Matlab program that shows how you solved the program--include sufficient comments so that any user could use your code.