To find P such that $P^{-1}AP = B$ is in JCF:

(1) (optional) Write down the equations for $\vec{e}_i$, using B.

(2) Write down the equations for $\vec{v}_i = P\vec{e}_i$.
($P = [\vec{v}_1\ \vec{v}_2 \cdots \vec{v}_n]$, $\vec{v}_i = P\vec{e}_i$, and $\vec{x} = P\vec{y}$.)

(3) Going from left to right in the block diagram, compute a chain of generalized eigenvectors corresponding to each tower, choosing a top vector so that the eigenvector at the bottom of each chain is linearly independent from the set of eigenvectors at the bottoms of the previously defined chains with the same eigenvalue.

(4) Check that $P^{-1}AP = B$. I conjecture that step 3 can always be done, and that P^{-1} exists if step 3 is followed.