A frame in an $n$-dimensional Hilbert space $H_n$ is a possibly redundant collection of vectors $\{f_i\}_{i \in I}$ that span the space. A tight frame is a generalization of an orthonormal basis. We define the factor poset of a frame $\{f_i\}_{i \in I}$ to be a collection of subsets of $I$ ordered by inclusion so that nonempty $J \subseteq I$ is in the factor poset if and only if $\{f_j\}_{j \in J}$ is a tight frame for $H_n$. The inverse factor poset problem inquires when there exists a frame whose factor poset is some given poset $P$. We determine a necessary condition for solving the inverse factor poset problem in $H_n$ which is shown to be sufficient for $H_2$. We address how factor poset structure is preserved under orthogonal projections. Furthermore, we discuss how many non-isomorphic factor posets are there for a fixed dimension $n$ and number of vectors $k$ and how large can these factor posets be. This is a joint work with Alice Chan, Martin Copenhaver, Logan Stokols and Allison Theobold. (Received January 16, 2015)