The object of this talk are a class of optimization problems which generalize the classical optimal transport setting, namely the class of linearly constrained optimal transport. After introducing the setting, the talk focuses on certain regularization techniques applicable to these optimization problems. Most notably, these techniques include the entropic regularization of optimal transport, which is connected to the Schrödinger problem and the Sinkhorn algorithm. The talk discusses the basic question of when such a regularization is justifiable, i.e. when the regularized problem approximates the initial problem in a suitable sense. For simple cases, positive results are presented, while more generally this talk also showcases reformulations, open questions, specific examples, and certain limitations.