Bumblebees are able to discriminate between different colours, as well as between different shades of a particular colour. Bumblebees are also able to learn concepts, such as same/different. In my thesis I tried to answer the following question: Are bumblebees of the species *Bombus terrestris dalmatinus* able to learn the concept of light vs. dark colour shades by applying a differential conditioning protocol. I offered artificial flowers of two different shades of green or blue to the bees in a training phase and two different shades of blue in the subsequent test phase. The results indicate that bumblebees are able to learn the concept of light/dark if forced to, but rather prefer absolute colour learning if possible.