This paper describes a teaching method used in an electrical machines course, where the students learn about electrical machines by designing them. The aim of the course is not to teach design, albeit this is a side product, but rather to teach the fundamentals and the function of electrical machines through design. The teaching method is evaluated by a student questionnaire, designed to measure the quality and effectiveness of the teaching method. The results of the questionnaire conclusively show that this method labelled ‘learning through design’ is a very effective way of teaching a components-based course. This teaching method can easily be generalised and used in other courses.