The new paradigms of higher education require new teaching strategies to meet the learning objectives of Biochemistry courses. In our department there have been some early educational innovations through the incorporation of topics of protein structure in web page, which then evolved into interactive java applications based on the use of CHIME, and is currently being adapted to Jmol. Another tool used is the PROTLAB software, which is a simulator of protein purification with 40 different proteins. Recently have added new activities to motivate the study of Biochemistry, especially first years student: Art and Biochemistry where the students express some of the biochemistry concepts through artistic expression and are graded including students. For senior student, have been designed activities to apply the basic knowledge of biochemistry to the explanation of everyday events for the general public, through the generation of a Wiki in a simple language. Debates activities have also been established for discussion of topics related to biochemistry. Also applications available in the web are used to reinforce some topics. All activities have a greater acceptance of students, although the effect on learning outcomes is ambiguous.