Student exposure to computational methods as part of the undergraduate curriculum became a reality in the Chemistry Department, University of Toronto, during the last few years. Recently, one 300-level course, and three 400-level courses included “hands-on” quality quantum mechanical computational methods based on the Gaussian computational suite of programs which proved to be extremely beneficial to the learning process.

Expanding further the involvement of theoretical methods to additional senior level courses through new approaches for computer modeling, particularly in the fields of bioorganic and bioinorganic chemistry will enrich the undergraduate learning, and make the graduates more competitive on the job market in the areas of biotechnology, pharmaceutical drug development, and materials science.

Several examples will be presented to illustrate the involvement of molecular modeling applications in the Chemistry curriculum.