This course is designed to teach the use of the Varian NMR spectrometers. Students will learn to use the VNMRJ menus to acquire and process data. They will also be taught the importance of proper procedures for locking, shimming, optimization of NMR parameters and phasing of NMR spectra, as well as its presentation. The following experiments will be covered in detail: 1D proton, 1D carbon, DEPT, COSY and HSQC. A basic theoretical description of NMR spectroscopy and various NMR experiments will also be presented. The course will cover aspects of multidimensional NMR, including shaped pulses, triple-resonance experiments and basic user programming. Setup, calibration, acquisition and processing of both gradient and non-gradient indirect detection experiments, coherence selection and gradient suppression, selective 1D experiments and water suppression techniques will also be covered. Hands-on training of the taught material will be emphasized.

Grading will be based on a midterm, a final and a take-home assignment.