Course: CHM1478, Quantum Mechanics for Physical Chemists

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Web: CHM1478 maintains a Quercus web space which archives a variety of course-related information including: grades, class announcements, lecture and lab materials, contact information and links to outside resources. In addition, class emails will periodically be sent via Quercus. To receive these emails, you must have a valid “utoronto.ca” email account registered with ROSI.

Office: LM420C

Lectures: LM 429, Thursday 14:00–16:00


Marking Scheme: homework 80% (starting Sept 5, will appear @Quercus and due the next Thu), some assignments will require Matlab (or any other programing environment), presentation of an advanced topic 20%

Course Description: This core course in Quantum Mechanics covers the basic Hilbert space formulation of Quantum Mechanics as well as operator algebra, representations, the Heisenberg and Schrodinger pictures, and the von-Neumann equation for density matrix. The list of other topics is as follows.

• Basic formalism of quantum mechanics: time-independent and time-dependent pictures

• Variational, perturbational, and semi-classical approaches

• Symmetry, representation theory

• Identical particles, second quantization

• Different boundary conditions: open and periodic systems