COURSE DETAIL

INTERMEDIATE PHYSICAL AND THEORETICAL CHEMISTRY

Country
United Kingdom - England

Host Institution
University of Bristol

Program(s)
English Universities,University of Bristol

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Chemistry

UCEAP Course Number
147

UCEAP Course Suffix
Y

UCEAP Official Title
INTERMEDIATE PHYSICAL AND THEORETICAL CHEMISTRY

UCEAP Transcript Title
INT PHYS&THEOR CHEM

UCEAP Quarter Units
12.00

UCEAP Semester Units

8.00

Course Description
This course explores the origin of quantization of molecular energies and demonstrates that wavefunctions are solutions to the Schrödinger equation for any 1-D problem; for particle in the 2-D box and for the hydrogen atom. It also examines the linearity of operators and identifes eigenvalues. Students explore the quantum mechanics of particle-in-a-box and its relationship to simple properties of ideal gases, as well as the quantum mechanics of the rigid rotor and its relationship to microwave spectroscopy. Students are able to deduce structural parameters from microwave spectra. The course also examines the relationship between the quantum mechanics of the harmonic oscillator and its relationship to IR spectroscopy.

Language(s) of Instruction
English

Host Institution Course Number
CHEM20190

Host Institution Course Title
INTERMEDIATE PHYSICAL AND THEORETICAL CHEMISTRY

Host Institution Campus
University of Bristol

Host Institution Faculty

Host Institution Degree

Host Institution Department
School of Chemistry

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