

COURSE DETAIL

ADVANCED QUANTUM CHEMISTRY

Country

Denmark

Host Institution

University of Copenhagen

Program(s)

University of Copenhagen

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Chemistry

UCEAP Course Number

130

UCEAP Course Suffix**UCEAP Official Title**

ADVANCED QUANTUM CHEMISTRY

UCEAP Transcript Title

ADV QUANTUM CHEM

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course provides an understanding of the quantum chemical description of many-electron systems like atoms and molecules. Topics include general angular momentum theory; time-independent perturbation theory and variation theory; Born-Oppenheimer approximation and molecular potential energy surfaces; general operator properties and the antisymmetrizer of the permutation group; many-electron theory; Hartree-Fock-Roothaan theory for self-consistent treatment of molecular electronic states; methods for describing electron correlation; and molecular interaction with external electric fields by means of perturbation theory.

Language(s) of Instruction

English

Host Institution Course Number

NKEA05037U

Host Institution Course Title

ADVANCED QUANTUM CHEMISTRY (KEMIVK)

Host Institution Campus

Host Institution Faculty

Faculty of Science

Host Institution Degree

Bachelor

Host Institution Department

Department of Chemistry

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