Weekly interactive sessions on Chemistry for B.Sc./M.Sc. students

HBCSE has initiated a Study Circle in Chemistry from 1st week of May aimed at promoting good understanding of key topics in chemistry at the senior college/university level.

The Study Circle is an open forum for learning in an informal and co-operative manner. There are no formal requirements for participation in the Circle, nor will there be any certificates of participation, prizes or awards. The sessions of the Circle will have no connection whatsoever with any formal syllabus, examinations, etc. There is no fee for participation in the Circle. Students will be free to join the Circle or leave it as they please.

The Circle is being held every Sunday in the morning at HBCSE campus, near Anushaktinagar Bus Terminal, Mankhurd, Mumbai 400088.

The Chemistry Study Circle is conducted by Prof. Arvind Kumar (formerly at HBCSE).

Day: Sunday

Timing: 10:00am - 1.30 p.m.

Venue: Room No G1, Olympiad Building, HBCSE

Interested faculties are also welcome to attend the study circle.

For any Queries:

Prof. Savita Ladage (savital@hbcse.tifr.res.in)

May 2014 to August 2014.

The topic of quantum chemistry was discussed during May to August 2014.

Topic for discussion: Molecular Orbital Theory

Sept 2014 to Oct 2014

The topic of Chemical Thermodynamics was discussed.

November 2014 to March 2015.

Sessions devoted to

Mathematics for Chemistry

Quantum Chemistry

Topics Discussed:

Co-ordinate systems (rectangular, spherical polar, etc.), functions (exponential, Gaussian, logarithmic, trigonometric functions ,etc.) , series expansions, Ordinary Calculus, Partial differentiation, change of variables and chain rule of partial differentiation, ordinary and partial differential equations, ideas of probability, and several other related topics.

Chemistry students need to have good working familiarity with these topics, not at the rigorous level of pure mathematics, but at the level that helps them understand the core areas of quantum chemistry, chemical kinetics, thermodynamics and statistical mechanics –areas that are basic to all of chemistry and are part of their physical chemistry syllabus.

In the absence of this mathematical background, many students at the U.G/P.G level find it difficult to understand their subject well.

Mathematics for Chemistry sessions to be held every Sunday will address this widespread difficulty chemistry student's face. These sessions will also include applications of the mathematical methods so learnt to core areas of chemistry.