Course Specifications

General Information

Course name	Computational Chemistry
Course number	CHEM3304
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Review of computer skills such as excel, origin , etc.
2 - use excel to demonstrate and present the results
3 - Use statistical tools in chemistry
4 - Use Curve plotting/fitting software
5 - Use Chemical drawing software

Intended Learning Outcomes

Knowledge and Understanding

* By the end of this course the student will be able to
* Use different engine to search of the chemical compounds
* use the excel program in the chemical labs to present the experimental data
* achieve the suitable skills to draw different molecules

Course Contents

1 - This course introduces the application of computer methods in chemistry. Topics discussed include computer representation of chemical structures, databases in chemistry, molecular modeling, optimization, statistical and regression analysis, Applications of these methods in data analysis, structural searching, drawing and prediction of molecular properties are discussed.
2 - Web sources, including search engines and data bases. Effective search techniques
3 - use chemdraw software to predict the molecular properties of the compounds

Teaching and Learning Methods

1 - lectures
2 - practical labs using compouter
3 - power point presentation

Students Assessment

Assessment Method	TIME	MARKS
homework and quizzess	weakly	15%
attendence and participating	weakly	5%
Two Med term exams	week number: 5 and 9	30%
Final exam (practical and theoretical)	week number: 16	50%

Books and References

Course note	hand outs
	power point notes