

CHEM 1230 Analytical Chemistry (3,3,0) (E)

Prerequisite: A-Level Chemistry or consent of instructor
 Co-requisite: CHEM 1252 Integrated Chemistry Tutorials II or CHEM 2045 Analytical & Testing Science Tutorials II

The fundamental principles of classical quantitative chemical analysis, gravimetric and volumetric analysis will be introduced, together with the statistical treatment of analytical data.

CHEM 1251 Integrated Chemistry Tutorials I (0,0,1) (E)

An integrated tutorial course supporting the courses CHEM 1260 Fundamentals of Chemistry and CHEM 1111 Organic Chemistry I. Students will engage in small group discussion and find solutions to assigned problems under the guidance of staff members of the Department of Chemistry.

CHEM 1252 Integrated Chemistry Tutorials II (0,0,1) (E)

An integrated tutorial course supporting the courses CHEM 1112 Organic Chemistry II and CHEM 1230 Analytical Chemistry. Students will engage in small group discussion and find solutions to assigned problems under the guidance of staff members of the Department of Chemistry.

CHEM 1260 Fundamentals of Chemistry (3,3,0) (E)

Prerequisite: A-Level Chemistry or Foundation of Chemistry
 Co-requisite: CHEM 1251 Integrated Chemistry Tutorials I
 This is intended to be the first chemistry programme course for all Chemistry majors. It is aimed to provide the students with a solid understanding of all the fundamental concepts and physical principles in chemistry necessary for the study of the more advanced or specialized programme course that follow. The topics discussed include atomic and molecular structures, chemical bonding, intermolecular forces and states of matter, and acid-base chemistry.

CHEM 1310 Physical Chemistry I (3.5,3,1) (E)

Prerequisite: A-Level Chemistry
 Co-requisite: CHEM 1252 Integrated Chemistry Tutorials II
 This course provides students with the fundamental concepts of chemical thermodynamics and its application in electrochemistry solution properties, phase equilibria.

CHEM 1320 Physical Chemistry Laboratory I (1,0,3) (E)

Prerequisite: CHEM 1330 Physical Chemistry I

CHEM 2320 Physical Chemistry Laboratory II (1,0,3) (E)

Prerequisite: CHEM 2330 Physical Chemistry II
 These courses provide students with practical work related to the principles studied in Physical Chemistry I & II. This course is open to Chemistry majors only.

CHEM 1510 Chemistry for Life Science (3,3,0) (E)

Prerequisite: A-Level Chemistry or AS-Level Chemistry or consent of instructor

This course gives a detailed treatment of topics selected from Organic and Physical Chemistry. The discussion of stereochemistry, molecular rearrangements, and chemistry of carbonyl compounds, carbanions and natural products is to be preceded by bonding, thermodynamics, chemical kinetics and surface catalysis. This course is offered to Non-Major Students only.

CHEM 1520 Chemistry for Life Science Laboratory (1,0,3) (E)

Prerequisite: A-Level Chemistry or AS-Level Chemistry or consent of instructor

Co-requisite: CHEM 1510 Chemistry for Life Science
 Experiments are selected to illustrate the principles discussed in Chemistry for Life Science.

CHEM 1660 Better Living through Chemistry (3,3,0) (E)

This course is designed for those non-science majors who are interested in the underlying chemistry of the many facets in modern living. Topics to be discussed include the chemistry of

foods, cooking and wine-making, the chemistry of drugs, health and beauty products, the chemistry of new materials, the design of miniature machines and molecular devices, the chemical tools in crime scene investigations, the molecular evolution of life, the chemistry of textiles and modern fabrics and archaeological chemistry. Live chemical demonstrations, online resources and case studies will be provided when applicable. About 4 to 5 topics from the above list will be discussed each time.

CHEM 1670 Better Living through Technologies (3,3,0) (E) and Innovations

Prerequisite: A-Level Chemistry

Designed as a free elective for science majors, the course aims to demonstrate, through daily life examples, the many important contributions and relevance of chemical sciences and technology to the betterment of humankind.

CHEM 2005 General Chemistry (3,3,0) (E)

Prerequisite: CHEM 1005 Introduction to Chemistry

Co-requisite: CHEM 2006 Integrated Tutorials I

To provide students with a good grasp of the fundamental concepts and basic principles and skills in chemistry necessary for the study of more advanced courses.

CHEM 2006 Integrated Chemistry Tutorials I (0,0,1) (E)

Co-requisite: CHEM 2008 Organic Chemistry I or CHEM 2005 General Chemistry

To enhance in-depth understanding of the lecture materials presented in the courses CHEM 2008 Organic Chemistry I and CHEM 2005 General Chemistry through small group discussion and guided problem solving.

CHEM 2007 Integrated Chemistry Tutorials II (0,0,1) (E)

Co-requisite: CHEM 2009 Organic Chemistry II, CHEM 2015 Analytical Chemistry

To enhance in-depth understanding of the lecture materials presented in the courses CHEM 2009 Organic Chemistry II and CHEM 2015 Analytical Chemistry through small group discussion and guided problem solving.

CHEM 2008-9 Organic Chemistry I and II (3,3,0) (E)

Prerequisite: NSS Level or CHEM 1005 Introduction to Chemistry

Co-requisite: CHEM 2006 Integrated Chemistry Tutorials I (For CHEM 2008) and CHEM 2007 Integrated Chemistry Tutorials II (for CHEM 2009)

To introduce students to the fundamentals of the mechanistic approach for organic reactions, to stress structures and syntheses, with special emphasis on stereochemistry, conformation and the use of spectroscopic techniques.

CHEM 2015 Analytical Chemistry (3,3,0) (E)

Prerequisite: CHEM 1005 Introduction to Chemistry

Co-requisite: CHEM 2007 Integrated Chemistry Tutorials II or CHEM 2045 Analytical & Testing Science Tutorials II

This course aims to educate students to understand the concepts of chemical analysis and to apply these fundamental principles to the analysis of environmental, clinical, industrial and other applied chemical systems.

CHEM 2016 Analytical Chemistry Laboratory (1,0,3) (E)

Prerequisite: CHEM 1005 Introduction to Chemistry

Co-requisite: CHEM 2015 Analytical Chemistry

This course aims to educate students to understand the concepts of chemical analysis and to apply these fundamental principles to the analysis of environmental, clinical, industrial and other applied chemical systems.

CHEM 2017 Physical Chemistry I (3.5,3,1) (E)

Prerequisite: CHEM 1005 Introduction To Chemistry

Co-requisite: CHEM 2005 General Chemistry

This is a foundation course in modern chemistry which provides