

GENERAL INFORMATION FOR PROSPECTIVE STUDENTS



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Natural and Agricultural Sciences

BSc (Honours) CHEMISTRY

CMY 700

Provisional: 2020
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1. General

The programme is only offered full time and extends over one year. The curriculum comprises an advanced study of the four major fields of chemistry. Because of the advanced level of the courses, the content of each module reflects the expertise and the research profile of the individual lecturers involved in the programme. The availability of the lecturers involved with this course, due to factors, such as unavailability due to study leave, may influence some of the content of the course offered.

2. Admission

The BSc Hons (Chemistry) programme is open to all BSc graduates with Chemistry as one of their majors, and to all holders of an equivalent three-year degree in Chemistry obtained at a recognized university. The admission to the Honours programme of the holders of the BSc (Chemistry) degree is not automatic. The applicants are accepted on the basis of their undergraduate record (to be submitted with their application) and/or an interview in the Department. A mark of 60% or more for Chemistry at 300 level is a prerequisite for entry into the selection process. The maximum number of students that can be accepted will be determined by the infrastructure. The general Regulations G 1.3, G.16 – G.29, G.62 and the Post-graduate Regulations of the University of Pretoria are applicable.

3. Applications

Prospective students must apply for admission using the University's on-line application process before **31 August 2019** and will be notified of the outcome by **15 December** provided final results have been submitted to the Honours Programme Coordinator (see below) if these results were not submitted as part of the original application.

Lectures commence on the third Monday of January at 08:00 in the Avogadro (room 3-22), Chemistry Building.

4. Course structure

There are two modules for each of the four major fields of chemistry. One of the two modules is presented in the 1st semester and the other in the 2nd semester. The course consists of the following theoretical modules, each of which is worth 10 credits:

CMY 706: Analytical (Mass Spectrometry and Chromatography)

CMY 707: Analytical (Electrochemistry, Statistics, Metrology)

CMY 708: Organic (Retrosynthesis, Diastereoselectivity, Aromatic chemistry)

CMY 709: Organic (Pericyclic reactions, Catalysis, Enantioselectivity, Amines)

CMY 714: Inorganic (Organometallics, Ligands and Complexes, Homogeneous catalysis)

CMY 715: Inorganic (Main group, Clusters, Kinetics, Bio- & Medicinal inorganic chemistry, Supramolecular chemistry)

CMY 716: Physical (Crystallography and Modelling)
CMY 717: Physical (Kinetics and Statistical mechanics)

The focus of the practical component of the course, including the two research projects is training in laboratory techniques and research skills ranging from technical skills, use of the scientific literature, data management and the interpretation and reporting of results, to professional conduct.

CMY 718 Organic/Inorganic Project 718 20 credits
This project has a significant laboratory component requiring preparation or manipulation of inorganic or organic chemicals. A report and a presentation are required.

CMY 719 Physical/Analytical Project 719 20 credits
This project has a significant component that can be described as instrumental or computational or analysis of data or theoretical. A report and a presentation are required.

CMY 730 Advanced practical techniques 730 15 credits
Chemical information literacy; Molecular modelling; NMR spectroscopy; Mass spectrometry; Crystallography, Metrology and Scientific writing skills will be presented from a practical point of view with an emphasis on the interpretation of data and use of instrumentation rather than on underlying theory. This is a year module, half of which is run before projects start in the first semester and the other half is run before projects start in the second semester.

5. Pass requirements

Admission to Chemistry 700 is conditional and subject to satisfactory progress in the 1st semester. The departmental Postgraduate Committee monitors the progress of students. In order to progress to the 2nd semester a student must obtain at least the subminimum of 40% each first semester module. The registration of students who do not meet this requirement will be terminated at the end of the 1st semester.

A final mark of at least 50% for each of the modules of the CMY700 course is required. The degree is awarded with distinction if an average mark of 75% and a mark of at least 65% in any of the modules are obtained.

6. Timetable

In general theory classes are from 08:30 to 10:00 five days a week according to the calendar unless the lecturer has other commitments and needs to make a different arrangement. The practical classes associated with CMY 730 will be offered later in the day generally from 13:30- 17:00. Once projects start, four days (4.5-5 hrs) a week are allocated to projects and one day to tutoring.

Attendance of Departmental seminars (Normally Fridays 11:30-12:30) is compulsory and is regarded as an essential part of the course.

7. Honours Programme Coordinator

Dr Liezel van der Merwe will act as programme coordinator for CMY 700 during 2019, will handle all administrative matters related to the course and is normally available for consultation in the mornings until 13:00.

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