

# Format of Materials

The overall course is designed to be used in a flexible way, and the time to complete this text will depend upon your starting knowledge and the time you can devote to study. The time necessary to study each module could be different depending upon the background of the student, but approximately 300 hours of total study time is thought to be sufficient to cover the whole course.

- The material is arranged into seven modules, and the modules are divided into units.
- It will be an effective learning strategy if you divide the units into work sessions lasting about one hour.
- The units start with a list of aims from which you can check your previous or prior knowledge. This is followed by a self-diagnostic test to check the level of understanding. The answers are given later in the text as a check. You should obtain at least 80% on this test to be certain of understanding the material. If the check shows that there is a deficiency in understanding then the work tasks in the unit can be undertaken in detail.
- The understanding of each unit can be checked by repeating the original diagnostic test at the end of the unit. Doing this will reveal whether your understanding has increased. If you still feel there is room for improvement, then repeat the unit at a later date, but sooner rather than later!
- Assessment tasks are included in the text and can be used as 'self-test' items.
- Many worked examples and problems are included in the text where appropriate.
- There is also a set of more advanced questions at the end of some units to check on understanding and provide a challenge, and also to apply the concepts to wider areas. Some of this work might require further reading in other texts. Answers to some of these questions are given in an appendix near the end of the book.
- The work is presented in a variety of styles to cater for the many different learning styles of students. Some tasks involve reading and comprehension, others are thinking-and-doing tasks, and some involve calculations.
- No practical details for doing experiments are included, only the results from some typical experiments. Practical work is left to the discretion of the tutors, if this is used as a complete college-based course. This book is intended as a student study guide.

The material included has been extensively tested with over 2000 students on foundation, access and subsidiary chemistry courses.

## **Aims** The aims, philosophy and content of this text are designed to:

- give an understanding of essential relevant chemical concepts;
- give people (often with limited previous chemical knowledge) sufficient understanding to be able to enter science-related courses involving chemistry in higher education, *e.g.* 'access' or 'foundation' courses, or as a set of course materials for 'subsidiary' courses in chemistry supporting other subjects, *e.g.* biology, environmental science, *etc.*
- present the material in a clear and friendly manner, and to allow the student to self-pace their acquisition of chemical knowledge;
- include relevant applications of chemistry to business, health, sport, industry;
- produce a set of course materials that can be used in a flexible way, from total self-study to guidelines for lecturers.