Course Guides Part A: Course Overview

Course Title: Chemistry A

Part A: Course Overview

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Course Description

The purpose of the Chemistry A course is to introduce you to the chemical knowledge, laboratory skills and procedures required for further study leading to tertiary levels in the fields of engineering and applied science. It is a practical-based course that through development of an understanding of matter, its structure, properties, reactions and methods for determining the amount of matter aims to provide you with a firm foundation in applying scientific concepts and processes to solve problems in both everyday and hypothetical situations.

Objectives/Learning Outcomes/ Capability Development

General capabilities:

This course contributes to the development of the following capabilities:

- Academic English language proficiency
- Scientific enquiry
- Problem-solving
- Group collaboration

Learning Outcomes:

At the successful completion of this course you should be able to:

1. Analyse the arrangement of elements in the Periodic Table (including its historical development) and relate trends in properties of elements to their atomic structures.
2. Demonstrate understanding of the major strong and weak bond types that categorise matter and relate the structures to a range of chemical and physical properties.
3. Apply the mole concept to calculate various amounts of chemicals.
4. Formulate and write balanced equations and apply these qualitatively and quantitatively to a wide
range of chemical reactions.

5. Apply the principles of the chemical and physical behaviour of gases to solve problems (including calculations) and to explain familiar facts, observations and phenomena.

6. Evaluate critically, experimental investigations and results and offer explanations for variability and error.

**Overview of Learning Activities**
The learning activities for this course include contact hours in lecture cum tutorial mode, and an equivalent amount of time spent in self-study, reading the text and completing exercises and assessment tasks. You will be required to complete a maximum of 8 hours of laboratory work.

**Overview of Learning Resources**
You will be supported in your studies with online resources via myRMITStudies. You can access the required Chemistry A eBook, Laboratory manual and Question manual for this program at www.rmit.edu.au/myRMIT. This portal also gives you access to important announcements, staff contact details, teaching schedule and assessment timelines and a variety of other important teaching and learning materials.

**Overview of Assessment**
Your assessment for this course will include Laboratory investigation reports, data analysis tasks (first and/or second-hand data) and a semester examination.

**Course Coordinator Details**
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