Tutorial Letter 102/2/2017

General Chemistry 1B

CHE1502

Semester 2

Chemistry Department

IMPORTANT INFORMATION

1. **Prescribed textbook**
2. **The Study Guide**
3. **The detailed study plan for CHE1502.**
4. ***MasteringChemistry* Access.**

BARCODE

The information in this tutorial letter is extremely important.

1. Prescribed textbook

The prescribed textbook for the CHE1502 module is:

Organic Chemistry Plus MasteringChemistry with Pearson eText (Paperback) Global Edition, 9 Edition by Leroy G. Wade, Jan W. Simek, Pearson Education Ltd. ISBN-13: **9781292151229**.

DO NOT BUY A TEXTBOOK WITHOUT THE ACCESS CODE FOR THE *MasteringChemistry* site (See section 4 below for further details regarding the *MasteringChemistry* access).

Students who are repeating the module and own the textbook (details shown below), MAY CONTINUE to USE that textbook shown below.

N.B. The access code to MasteringChemistry is required.

Organic Chemistry New Pearson International Edition, plus MasteringChemistry, 8 th Edition; Leroy G. Wade, *Whitman College* **August 2013,** Valuepack. ISBN: 9781447963516

2. The Study Guide

The textbook should be your primary study material.

The study guide that was part of your study package is not the primary source of study material, and was written mainly to simplify topics in the textbook which students have trouble understanding.

It is not complete and does not cover all the material in the course. The study guide contains material that was previously covered in this module (such as Introductory Physical Chemistry), which have been shifted to other modules].

Topics in the **study guide** which are **not in section 6.1 in Tutorial letter 101 will not be examined and can be omitted**. **Use the information given below as the definitive guide as to what is examinable.**

CHE1502 STUDY GUIDE:

IMPORTANT:

- **PART 1 is no longer relevant – IGNORE.**
- **PART 2, contains Study Units 4 to 11** which **cover the topics of this module.**

3. Detailed Study Plan for CHE1502.

If you have trouble with the textbook, then consult the relevant section in the study guide. In light of the above, **it is imperative that you use the textbook and not the study guide as your primary study material in this module.**

The study units refer to the Unisa Study Guide and the chapters with sections refer to the prescribed textbook.

a) Use the **information in A if you are using the textbook or the eText, 'Organic Chemistry', Pearson, Global Edition, 9 Edition** by Wade and Simek.

b) Use the **information in B** if you are using **the textbook, 'Organic Chemistry', Pearson New International edition, 8th edition** by Wade**,** then applies.

N.B. The textbook has a **PROBLEM-SOLVING STRATEGY** and **SOLVED PROBLEMS** in different chapters. These Problem-Solving Strategies and Solved Problems should be **carefully studied**.

3.1 Study Plan for Assignment 1.

Assignment 1 covers **Topics (1) - (5) in 6.1 in Tutorial letter 101.**

The specific study units (in the study guide) and the sections to be studied in the textbook by Wade are given below.

Study Unit 4. *Overview of Chemical Bonding*. Most of the content of this chapter is a revision of the work covered in CHE1501.

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 1:

Read sections 1-1, Study sections 1-2 to 1-11, Read section 1-12. Study sections 1-12A, 1-13 to 1-19

Chapter 2:

Study sections 2-1 to 2-14, Read sections 2-15 to 2-16

B. Textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Chapter: Introduction and Review:

Read section 1 and Study sections 2 to 14.

Chapter: Structure and Properties of Organic Molecules:

Read section 1, Study sections 1A, 2 to 11 and Read sections 12 to 14.

Study Unit 5. Hydrocarbons – Structure, Nomenclature, Reactions

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 3:

Study sections 3-1 to 3-4. Read section 3-5, Study sections 3-6 to 3-11.

Chapter 4:

Read section 4-1, Study sections 4-2 to 4-3, Read sections 4-4 and 4-6 to 4-11, Study section 3-13, Read section 4-14

N.B. Study Reactive intermediates 4-16A to 4-16C.

B. Textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Chapter: Structure and Stereochemistry of Alkanes:

Study sections 1 to 4. Read section 5, Study sections 6 to 11.

Chapter: The Study of Chemical Reactions:

Read section 1, Study sections 2 to 3, Read sections 4 and 6 to 11, Study section 13, Read section 14

N.B. Study Reactive intermediates 16A to 16C.

Study Unit 7 Introduction to Stereochemistry

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 5:

Study sections 5-1 to 5-4B.

B. Textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Chapter: Stereochemistry
Study sections 1 to 4B.

Study Unit 8 Alkyl Halides

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 6:
Read section 6-1, Study sections 6-2, 6-4, 6-5A and 6-6 to 6-10A, Study sections 6-11 to 6-13A and 6-16 to 6-21.
Chapter 7:
Study sections 7-9 to 7-14, 7-16 and 7-17

B. Textbook**, 'Organic Chemistry', Pearson New International edition**

by **Wade:**

Chapter: Alkyl Halides: Nucleophilic Substitution and Elimination:
Read section 1, Study sections 2, 4, 5A and 6 to 10A, Study sections 11 to 13A and 14 to 21.
Chapter: Structure and Synthesis of Alkenes:
Study sections 9A and 9 E.

Study Unit 9. Alcohols and Ethers

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 10:

Read section 10-1, Study sections 10-2 to 10-3A, 10-3C and 10-4, Read section 10-5, Study sections 10-6 and 10-11.

Chapter 11:

Study sections 11-1 to 11-2, 11-5 (leave out tosylates), 11-6 to 11-7, 11-10A and a good review of how to write reactions mechanism can be found in 'PROBLEM-SOLVING STRATEGY' (AFTER 11-10B).

Chapter 7:

Study section 7-18.

Chapter 14:

Study sections 14-1 to 14-2 C [**understand trends based on bonding and intermolecular forces** do **not use values of physical properties** to **compare properties of compounds**], Study sections 14-3 to 14-3B, 14-5 and 8.

B. The textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Chapter: Structure and Synthesis of Alcohols:

Read section 1, Study sections 2 to 3A, 3C and 4, Read section 5, Study sections 6 and 11.

Chapter: Reactions of Alcohols:

Study sections 1 to 2, 5 (leave out tosylates), 6 to 7, 10A and a good review of how to write reactions mechanism can be found in 'PROBLEM-SOLVING STRATEGY' (AFTER 10B).

Chapter: Structure and Synthesis of Alkenes:

Study section 10.

Chapter: Ethers, Epoxides and Thioethers:

Study sections 1 to 2 C [**understand trends** based on **bonding and intermole forces** do **not use values of physical properties** to **compare propertie compounds**], Study sections 3 to 3B, 5 and 8.

Study Unit 10. Amines

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 19:

Read section 19-1, Study sections 19-2 (excluding names of aromatic and heterocyclic amines), Study sections 19-3 to 19-7.

B. Textbook, 'Organic Chemistry', Pearson New International edition by **Wade:**

Chapter: Amines:

Read section 1, Study sections 2 (excluding names of aromatic and heterocyclic amines), Study sections 3 to 7.

3.2 Study Plan for Assignment 2

Assignment 2 covers

a)REVISION of selected sections covered in assignment 1 [sections from **Topics (2) - (4) of 6.1 in Tutorial Letter 101**]:

Review of Conformations, Mechanism of the halogenation of alkanes, Mechanisms of nucleophilic substitution and elimination reactions of alkyl halides and alcohols as well as the structure of chiral compounds.

b) Selected sections of **Topics (7) - (8) of 6.1 in Tutorial Letter 101**, further details:

Study Unit 6. Unsaturated Hydrocarbons (Alkenes and Alkynes)

A. Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 7:

Read section 7-1, Study sections 7-2 to 7-3A, Read 7-3 B, Study sections 7-4 to 7-5, Read section 7-6, Study section 7-7, Read section 7-8 A and Study sections 7-8B, 7-8C, 7-8 to 7-10.

Chapter 8:

Study section 8-1 to 8-7A, 8-8, 8-10 (up to figure 8-7)

Chapter 9:

Study sections 9-1 to 9-3, Read section 9-4 and Study sections 9-5 to 9-10.

B. The textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Chapter: Structure and Synthesis of Alkenes

Read section 1, Study sections 2 to 3A, Read section 3B, Study sections 4 to 5, Read sections 6 to 7A, Study sections 7 B, 7C, 7-8 C to 10.

Chapter: Reactions of Alkenes

Study sections 1 to 7A, 8, 10 (up to figure 6).

Chapter Alkynes:

Study sections 1 to 3, Read section 4 and Study sections 5 to 10.

3.3 Study Plan for Assignment 3

Assignment 2 covers

a)**Topics (6) in 6.1 in Tutorial letter 101.**

b)REVISION of selected sections covered in assignment 2 [sections from Topics **(7) - (8) of 6.1 in Tutorial Letter 101**].

c) **Topics (9) - (10) in 6.1 in Tutorial letter 101**, further details:

Study Unit 11. Carbonyl Compounds and their Derivatives

A. The Textbook, 'Organic Chemistry', Global Edition, 9 Edition by **Wade and Simek:**

Chapter 18:

Study sections 18-1 to18- 4, Read section 18-6, Study section 18-11, Read section 18-20.

Chapter 20:

Read section 20-1, Study sections 20-2 to 20-5 (up to nomenclature of carboxylic acid salts), Read section 20-6.

Chapter 21:

Read section 21-1, Study section 21-2 (excluding lactones and lactams), Study sections 21-3 and 21-5.

B. The textbook**, 'Organic Chemistry', Pearson New International edition** by **Wade:**

Wade Chapter: Ketones and Aldehydes:

Study sections 1 to 4, Read section 6, Study section 11, Read sections 13, 14 and 17 (up to Equilibrium of Acetal Formation), Read sections 9 and 20.

Wade Chapter: Carboxylic Acids:

Read section 1, Study sections 2 to 5 (up to nomenclature of carboxylic acid salts), Study sections 9 and 10.

Wade Chapter: Carboxylic Acid derivatives:

Read section 1, Study section 2 (excluding lactones and lactams), Study sections 3 and 5.

4. *MasteringChemistry* Access

4.1 Access Code

The access code can be obtained via either process (i) or process (ii) below:

(i) To **access *MasteringChemistry***, you must **use the access code that is included in the prescribed textbook that you bought** (see Tutorial Letter 101 for the textbook details.

N.B. Keep all papers included in your textbook – do NOT throw away anything.

Also note that if y**ou INTEND STUDYING SECOND and THIRD LEVEL CHEMISTRY then you are ADVISED TO PURCHASE THE TEXTBOOK since THIS TEXTBOOK IS ALSO PRESCRIBED for the Organic Chemistry, CHE2613 and CHE3703 modules.**

N.B. Keep the Access Code in a Safe Place - We are Not in a Position to Provide You with Another Access Code.

If you HAVE the ACCESS CODE, then PROCEED to READING SECTIONS 4.2 AND 4.3 below.

(ii) If you **DO NOT HAVE THE PRESCRIBED TEXTBOOK**, you **MAY BUY THE ACCESS CODE AT A CHEAPER PRICE BY CONTACTING PEARSON DIRECTLY**. The **ACCESS CODE will also give you ACCESS TO THE E-BOOK** (which can be accessed online).

You **can PURCHASE THE ACCESS CODE** by:

1) **SENDING AN E-MAIL TO:** pearson-za.ebooksupport@pearson.com

This is a central e-mail address where more than one person is dealing with UNISA's licences.

When you send the e-mail request, please specify that:

- **you are a REGISTERED UNISA CHE1502 Chemistry STUDENT**
- you **need to PURCHASE AN ACCESS CODE for your course**
- the **course code is: CHE1502S22017**
- the **textbook is ORGANIC CHEMISTRY by LG Wade and JW Simek (9th edition).**

2) **After you have sent the request via e-mail, YOU WILL RECEIVE A RETURN E-MAIL** which **will PROVIDE YOU WITH THE INFORMATION ON THE PROCEDURE** (for **payment, etc.**) to **obtain the correct access code.**

3) **Follow ALL the STEPS given in the reply e-message in 2)** Note, if you **DO NOT FOLLOW ALL THE STEPS as stipulated in the reply e-mail message to you**, then you **WILL NOT BE ABLE TO RECEIVE THE CORRECT ACCESS CODE.**

- **Once you HAVE THE ACCESS CODE, then PROCEED to reading SECTIONS 4.2 and 4.3 below.**

4.2. Registration on *MasteringChemistry*

All students should **use THE ACCESS CODE** for the textbook, **Organic Chemistry by Wade to REGISTER for *MasteringChemistry***.

Once **you have ACCESS to *MasteringChemistry***, then, you **need to LOCATE THE COURSE by entering the course code:**

CHE1502S22017

N.B. When **prompted for the TEXTBOOK VERSION, you MUST CHOOSE:**

"*Wade, Organic Chemistry, Global Edition 9e*, even for users of the earlier textbook since the New Pearson International Edition is not listed in the dropdown menu.

[Also, **if you DO NOT SELECT THIS TEXTBOOK, you will be ROUTED to the SITE for the CHE1501 textbook and your access code will NOT work for the CHE1502 textbook**].

Note

The **access code used for the CHE1501 module CANNOT be used for this course. A *MasteringChemistry* access code is linked to a specific textbook.**

The global edition ninth edition e-book can also be accessed on the *MasteringChemistry* site.

On the course site, **CHE1502S22017**, you will find:

- ***The Introduction to MasteringChemistry***. You **MUST** go through this introduction since it **explains how *MasteringChemistry* works** and it also contains i**nstructions on how to draw structures, write names**, etc.
- The **Study Area on the *MasteringChemistry* site** which also has resources such as Notes, PowerPoint Presentations, etc. that will assist you with your studies.
- The tasks have been posted on the *MasteringChemistry* site.

It is essential to **do the Task, *Introduction to MasteringChemistry*, first. If you skip this section, you will struggle to draw structures, write the names of compounds and draw arrows to represent electron flow and you should not blame the system when you struggle.**

4.3. Technical Requirements for *MasteringChemistry*

The important **technical requirements** for **complete utilization** of the *MasteringChemistry* site are:

- **Windows 7 or 8**
- **Java Version 8**
- **Google Chrome or Mozilla Firefox**

N.B. If you DO NOT HAVE the above LOADED ON YOUR COMPUTER, you will NOT BE ABLE to DO THE TASKS PROPERLY.
