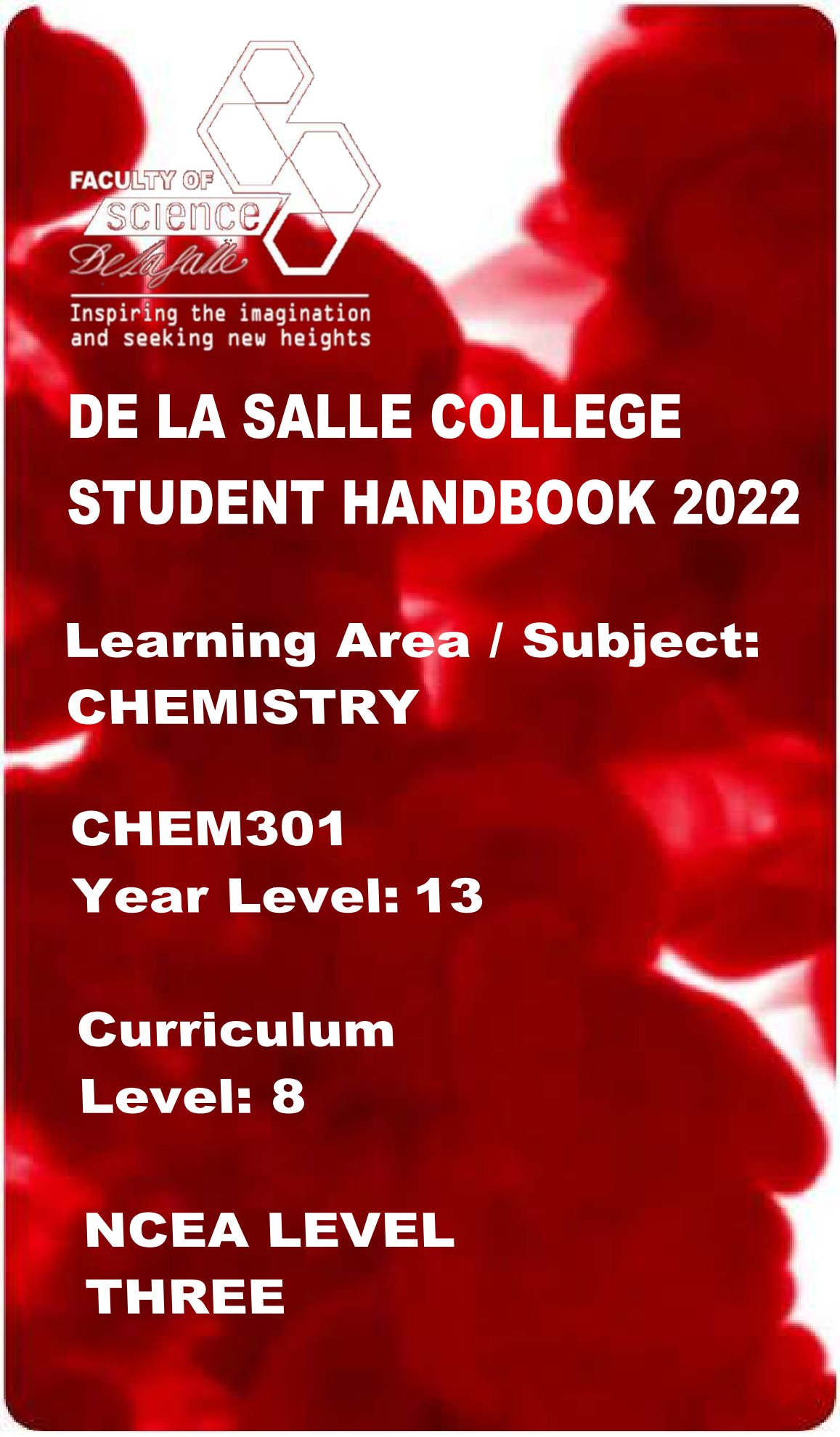


DE LA SALLE COLLEGE STUDENT HANDBOOK 2022

Learning Area / Subject: CHEMISTRY

CHEM301
Year Level: 13

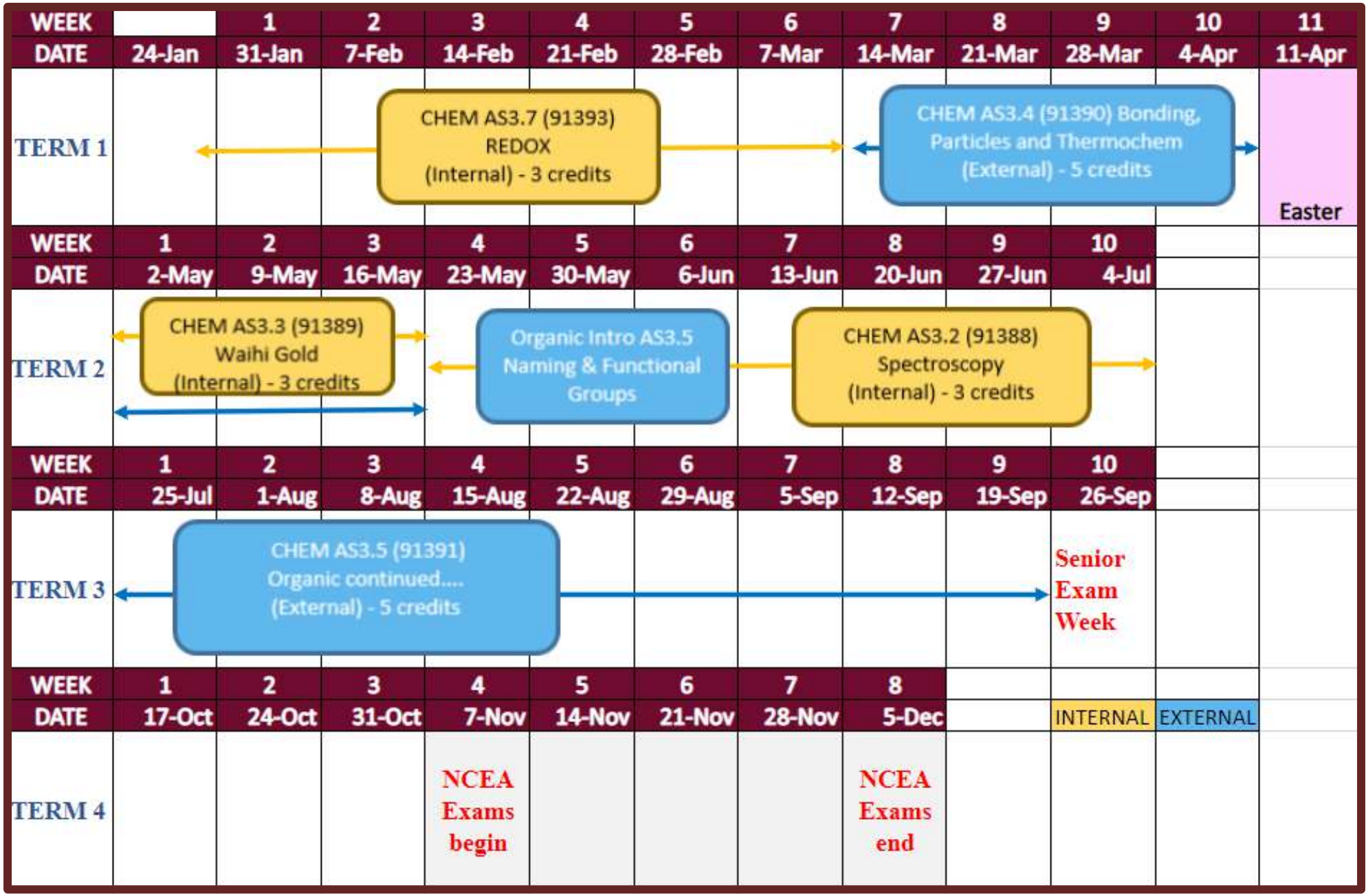
Curriculum Level: 8

NCEA LEVEL THREE

FACULTY OF SCIENCE

De La Salle College, 81 Gray Avenue, Mangere East, Manukau City

Year 13 Chemistry (CHE301) Year Planner 2022



De La Salle College

Science

CHE301 Assessment Statement 2022

Course is endorsable

Year : 13 | Course : Chemistry | Mr K Raukura | Total Credits : 24

This is a course based on Level 8 of the Chemistry curriculum. Students develop further skills in Chemical Analysis and build on knowledge gained at Level 2. The course provides a solid foundation for possible tertiary study. Students leave with a deeper appreciation of the chemical world around them, and understanding of a range of chemical processes and how chemicals are used in industry and society.

Pre Requisites
12 Level 2 Chemistry credits

Additional Requirements
Workbook cost $40
Scientific Calculator

No	Standard Number	Version	Level	Credits	Lit / Num	Full Title	Method of Assessment	Assessment Opportunities Offered	Approximate Date	Grade	Teacher Signature
1	91389	2	3	3	L1 Lit B Lit	Chemistry 3.3 - Demonstrate understanding of chemical processes in the world around us	Assignment	1	Week 3Term 2		
2	91388	2	3	3		Chemistry 3.2 - Demonstrate understanding of spectroscopic data in chemistry	Test	1	Week 10 Term 2		
3	91393	2	3	3	L1 Lit	Chemistry 3.7 - Demonstrate understanding of oxidation-reduction processes	Test	1	Week 6 Term 1		
4	91390	2	3	5	L1 Lit	Chemistry 3.4 - Demonstrate understanding of thermochemical principles and the properties of particles and substances	Exam	External	NCEA		
5	91391	2	3	5	L1 Lit	Chemistry 3.5 - Demonstrate understanding of the properties of organic compounds	Exam	External	NCEA		
6	91392	2	3	5	Num L1 Lit	Chemistry 3.6 - Demonstrate understanding of equilibrium principles in aqueous systems	Exam	External	Optional		

School Assessment Procedures - You can view your rights and obligations in the school's assessment procedures in the **Student Assessment Handbook**

Record your internal grades and ask your teacher to sign it off as correct. You can then use this as evidence of your achievement.

2022 Course Outline – Y13 Chemistry (CHEM301)

Subject: Chemistry **NCEA Level:** Three

Entry Requirements: a minimum of 12 credits from NCEA Level Two Chemistry

Number of credits gained: 19

Method of assessment:

- Both internal and external assessment
- The internal assessment is given after a series of mock practice runs
- Mock externals at the end of each unit of work
- Mid-Year Examinations
- Preliminary Examinations

Looking Ahead:

- Tertiary level study
- A diverse range of careers stem from Chemistry -
  e.g. brewery worker, baker, food technologist, community pharmacist, forensic scientist, fishery officer, geologist.

Course Description

Course aims:

This course is aimed at those students who have achieved well in Year 12 and who know that they wish to pursue a career that requires chemistry. Such careers include engineering, medicine, materials, pharmaceuticals and much more.

The course consists of Achievement Standards from the new Level 3 Chemistry course which is the result of the curriculum re-alignment.

Course learning outcomes:

- To be able to individually carry out a research investigation into the chemical processes that are found in the world around us.
- To be able to describe and utilise spectroscopic data in chemistry.
- To be able to describe the properties of atoms, molecules, and ions, and thermochemical principles.
- To be able to understand the structure, physical properties, and reactions of organic compounds.
- To be able to describe use observations to explain oxidation and reduction reactions.

Students will not be granted extensions for assignments. Extensions will be granted at the discretion of the teacher in charge, and only under truly exceptional circumstances and when an application for extension form has been submitted.

2022 Course Assessment Statement – Y13 Chemistry (CHEM301)

HOW WILL I BE ASSESSED IN THIS SUBJECT?

Achievement Standard	Level and Credit Value	Internal or External Assessment	Brief Description	My grade for prelims	My final grade for internals
CHEM AS3.2 (91388) Demonstrate understanding of spectroscopic data in Chemistry	Level 3 3 Credits	I	Using provided spectroscopic data, students will answer questions related to a variety of different organic compounds.		
CHEM AS3.3 (91389) Demonstrate understanding of chemical processes in the world around us.	Level 3 3 Credits	I	Students will individually research a chemical process that is utilised in a real world industry.		
CHEM AS3.4 (91390) Demonstrate understanding of thermochemical principles and the properties of particles and substances.	Level 3 5 Credits	E	Describe the bonding between atoms, molecules and compounds, their shape and period trends and thermochemical principles		
CHEM AS3.5 (91391) Demonstrate understanding of the properties of organic compounds.	Level 3 5 Credits	E	Analyse and understand principals of organic chemistry and reactions related to their functional groups		
CHEM AS3.7 (91393) Demonstrate understanding of oxidation-reduction processes	Level 3 3 Credits	I	Use observations and knowledge of oxidation and reduction reactions to explain the formation of metals in electrolytic and electrochemical cells.		

Note: Depending on class ability. Extra internal assessments might be added if required and if the challenge and time is warranted.

De La Salle College – Chemistry Level 3 (CHEM301) - Year Planner 2022

Subject: 13 Chemistry Teacher in charge: RAU Year Level: 13 Curriculum Levels: 8

Unit Title: AS91388 (AS3.2 Chemistry Internal) – Demonstrate understanding of spectroscopic data

Achievement objectives:

- Investigate and measure the chemical and physical properties of a range of groups of substances.
- Apply knowledge of chemistry to explain aspects of the natural world and how chemistry is used in society to meet needs, resolve issues, and develop new technologies.

Learning outcomes/skills:

- To be able to use spectroscopic data (provided) to correctly analyse and answer questions surrounding different organic compounds.

Assessment tasks/method:

- Students must justifying the structure of organic molecules by integrating spectroscopic data from the different techniques.
- Provided spectroscopic data is limited to that collected from mass, infrared (IR) and 13C nuclear magnetic resonance (NMR) spectroscopy.
- Organic molecules used in examples are limited to alkanes, alkenes, alcohols, haloalkanes, amines, aldehydes, ketones, carboxylic acids, amides, acid chlorides and esters.
- Aspects of structure are limited to molar mass (from mass spectrometry), functional groups (from IR), length of carbon chain and structural isomers (from 13C NMR).

Key competencies: Thinking, Managing self, Using language, symbols, and texts.

Values: Innovation, inquiry and curiosity, excellence

Approximate time required: 3 weeks

Unit Title: AS91389 (AS3.3 Chemistry Internal) – Demonstrate understanding of chemical processes in the world around us

Achievement objectives:

- Understand that scientists have an obligation to connect their new ideas to current and historical scientific knowledge;
- Develop and carry out investigations that extend their science knowledge, including developing their understanding of the relationship between investigations and scientific theories and models;
- Use accepted science knowledge, vocabulary, symbols, and conventions when evaluating accounts of the natural world and consider the wider implications of the methods of communication and/or representation employed;
- Apply knowledge of chemistry to explain aspects of the natural world and how chemistry is used in society to meet needs, resolve issues, and develop new technologies.

Learning outcomes/skills:

- To be able to individually research a real life chemical process and to write a comprehensive report on the process with all its implications for society.

Assessment tasks/method:

- Student individual research in form of written report.
- Must include full references.
- External NCEA examination at year's end.

Key competencies: Thinking, Managing self, Using language, symbols, and texts.

Values: Inquiry and curiosity, excellence, respect.

Approximate time required: 3-4 weeks

Unit Title: AS91390 (AS3.4 Chemistry External) – Demonstrate understanding of thermochemical principles and the properties of particles and substances

Achievement objectives:

- Investigate and measure the chemical and physical properties of a range of groups of substances;
- Relate properties of matter to structure and bonding;
- Develop an understanding of and use the fundamental concepts of chemistry (for example, equilibrium and thermochemical principles) to interpret observations.

Learning outcomes/skills:

- To be able to describe the properties of atoms, molecules, and ions, and thermochemical principles.

Assessment tasks/method:

- Mid Year Mock Examinations (Term 2).
- Preliminary Mock Examinations (Term 3).
- External NCEA examination at year's end.

Key competencies: Thinking, Managing self, Using language, symbols, and texts, Participating and contributing.

Values: Inquiry and curiosity, excellence.

Approximate time required: 10 weeks

Unit Title: AS91391 (AS3.5 Chemistry External) – Demonstrate understanding of the properties of organic compounds **Achievement objectives:** • Investigate and measure the chemical and physical properties of a range of groups of substances; • Relate properties of matter to structure and bonding; • Develop an understanding of and use the fundamental concepts of chemistry (for example, equilibrium and thermochemical principles) to interpret observations. **Learning outcomes/skills:** • To be able to understand the structure, physical properties, and reactions of organic compounds. **Assessment tasks/method:** • Mid Year Mock Examinations (Term 2). • Preliminary Mock Examinations (Term 3). • External NCEA examination at year's end. **Key competencies:** Thinking, Managing self, Using language, symbols, and texts, Participating and contributing. **Values:** Inquiry and curiosity, Excellence. **Approximate time required:** 8-9 weeks	**Unit Title:** AS91393 (AS3.7 Chemistry Internal) – Demonstrate understanding of oxidation-reduction processes **Achievement objectives:** • Investigate and identify oxidants and reductants, and therefore species in a reaction that are oxidised and reduced; • Form half equations and full equations for redox reactions in acidic and alkaline conditions; • Investigate and draw electrochemical cells; • Develop predictions for reactions using a knowledge of electrochemistry and redox equations. **Learning outcomes/skills:** • To be able to use redox reaction chemistry to explain electrochemical reactions. **Assessment tasks/method:** • In class test (Term 2). **Key competencies:** Thinking, Managing self, Using language, symbols, and texts, Participating and contributing. **Values:** Inquiry and curiosity, excellence, innovation. **Approximate time required:** 4 weeks	

2022 Chemistry Level 3 (CHEM301) – Student Guide to Bibliographies / Referencing

Plagiarism includes using another person's ideas and presenting them as your own AND paraphrasing (rewording) without acknowledging who those ideas came from.

You must reference using APA format.

You need to include in-text citations and a bibliography. In-text citations must be placed at the end of the sentence, which includes information from that source. This sentence, however, must be written in your own words.

A bibliography is the 'trail' of reading that you did to inform your thinking for your essay or assignment. A bibliography is organised alphabetically by the author's last name. Different sources of information need to be referenced in a different format in your bibliography– eg. Books, websites, journal articles. The following link gives you clear examples of how to format using APA referencing.

http://www.cite.auckland.ac.nz/index.php?p=quickcite

Students who fail to correctly reference or who plagiarise will automatically be awarded a Not Achieved grade.

De La Salle College
Assessment Result Appeal Form 2022

Name: _____ Class: _____

Name/number of standard being appealed: _____

Subject: _____ Teacher who marked work: _____

Grade awarded for standard: _____

Date work returned to student: _____ Date of appeal:_____

Reason for appeal:

Student signature: _____ Caregiver's signature: _____

OFFICE USE ONLY

Teacher response:

HOF response:

Principal's Nominee response:

Final decision:

De La Salle College 2022

Absence From Internal Assessment

Application for Extension

Student: _____ Class: _____

Subject: _____ Teacher: _____

Assessment title: _____

Standard number: _____

Type of assessment activity *(test, practical, assignment etc).*

Date of assessment or due date: _____

Reason for application:

- ☐ Illness or injury: *medical certificate or a letter from parent / caregiver* must be attached.
- ☐ Family / personal trauma: documentation must be attached *(eg. a letter from parent / caregiver, counsellor or Dean).*
- ☐ School activity *(sporting or cultural)* _____

Signature of the teacher-in-charge of the activity: _____

Decision by Principal's Nominee:

- ☐ Extension granted, new due date: _____
- ☐ New assessment granted, new date: _____
- ☐ Compassionate consideration will be used to determine a grade. HOD / TIC to attach documentation of evidence used to determine the grade and the grade awarded.
- ☐ Application denied. Comment: _____

_____

The reason for this has been explained to me and I accept the decision.

Signed: _____ (Student) _____ (Teacher)