Module code	SC-2224			
Module Title	Carbonyl Chemistry and Organic Synthesis			
Degree/Diploma	Bachelor of Science (Chemistry)			
Type of Module	Major Core			
Modular Credits	4	**Total student Workload**	10	hours/week
		Contact hours	4	hours/week
Prerequisite	None			
Anti-requisite	SC-3323 Organic Synthesis and Design			

Aims

To provide students with sound knowledge on carbonyl chemistry, protecting group strategy, heterocyclic chemistry and basic strategies of retrosyntheses.

Learning Outcomes

On successful completion of this module, a student will be expected to be able to:

Lower order :	40%	- describe the preparation, reactions and properties of carbonyl and heterocyclic compounds - identify different protecting groups - describe basic retrosynthesis
Middle order :	50%	- apply theories and concepts learnt in the interpretation of experimental observations and results - interpret IR, NMR and MS spectra
Higher order:	10%	- present experimental reports in a clear and concise manner - work independently or collaboratively as a team

Module Contents

- Carbonyl chemistry: Different types of carbonyl compounds, their properties, preparation and reactions
- Enols and enolates: Preparation and their reactions
- Heterocycles: Selected heterocyclic organic compounds and their reactions.
- Synthesis: Introduction to the disconnection approach including the use of protecting groups
- Spectroscopy: Using various spectroscopic techniques to interpret the different types of carbonyl compounds

Assessment	Formative assessment	Weekly Tutorial Sessions and Discussion
	Summative assessment	Examination: 60%
		Coursework: 40% - 3 Individual Practical Reports (20%) - 2 Individual Written Assignments (10%) - 2 Class Tests (10%)