

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			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
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			
<ul style="list-style-type: none"> - 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%)	