

Level	Level - 03				
Course Synopsis Course Code	CYU 3302				
Course Title	Basic Practical Chemistry				
Credit value	03				
Core/Optional	Core				
Prerequisites	A/L 3 passes in science stream including Chemistry				
Hourly breakdown	Theory	Practical	Independent Learning	Assessment	Total
	12 Sessions x 02hrs.= 24 hrs	8 days Lab x 7 hrs.= 56 hrs	12 Sessions x 03 hrs. + on line and other resources = 65 hrs.	(PAs -1 hr. x 4) +(7 quizzes x 10 min) = 05 hrs	150 hrs
Course Aim/s.	To be engaged in scientific thinking to develop an experimental procedure with an understanding of the theory related, to follow it using correct techniques and record scientifically: Ability to work as a team, lead a team for a task and to present the findings to a wider audience in a logical manner.				
PLOs addressed by course	<p>PLO1: Theoretical Knowledge: Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the BSc degree.</p> <p>PLO2: Practical Knowledge and Application. Acquire competency in practical skills and the necessary knowledge to appropriately use these skills.</p> <p>PLO3: Communication: Communicate reliably, efficiently and effectively to present information, ideas and concepts to the scientific community as well as to the wider society.</p> <p>PLO4: Individual Work, Team Work and Leadership: Function effectively as an individual, and as a team member, sharing work and experiences, leading and managing assigned tasks to completion on time, demonstrating leadership to address situations in diverse and multi-disciplinary environments in day to day life.</p> <p>PLO5: Creativity and Problem Solving: Identify problems and argue out and analyze such problems using qualitative and/or quantitative practical approaches in scientific methodology to provide valid conclusions</p> <p>PLO6: Adaptability and Flexibility: Develop appropriate strategies to adapt to changing environments.</p> <p>PLO7: Information and communication technology literate</p> <p>PLO8: Vision for Life: Identify where one wants to be and develop long term goals maintaining competency to conduct scientific investigations and proceed to undertake further studies.</p> <p>PLO9: Lifelong Learning: Foresee new trends and recognize their impact, and update knowledge and develop new skills to meet future changes and challenges-</p>				
Course Learning Outcomes (CLO)	<p>The students should be able to:</p> <p>CLO1. Should have the theoretical knowledge related to the experiments of the laboratory sessions and engage in scientific thinking.(PLO 1)</p> <p>CLO2. Ability to identify common safety measures in the lab and to adhere to personal safety measures.(PLO 1,2 & 5)</p> <p>CLO3. Ability to identify the glassware, glass type and clean glassware (PLO 1, 2)</p> <p>CLO4. Ability to select the correct volume and weight measuring device depending on the required accuracy and use them accurately.(PLO 2,5&9)</p> <p>CLO5. Ability to do the necessary calculation, prepare a standard solution and dilute.(PLO 1& 2)</p>				

	<p>CLO6. Ability to carry out a titration using an indicator.(PLO 1,2& 4)</p> <p>CLO7. Ability to measure reaction time accurately using the stop watch (PLO 1&2).</p> <p>CLO8. Ability to find the procedure, identify and confirm organic functional groups, anions and cations in a given sample.(PLO 1,2,3,4,5 &6)</p> <p>CLO9. Ability to read, understand and develop a procedure, write a flow chart, follow it accurately within a given time and record.(PLO 7)</p> <p>CLO10.Ability to work as a team, lead a team for a task and to present the findings to a wider audience in a logical manner.(PLO 3,4,5, 6,7,9)</p> <p>CLO11.Identify where one wants to be and develop a need on your own to do things to your best ability to achieve your goal in life and to be aware of the social responsibility (PLO 8).</p>	
	<p>safety symbols and their importance; theory behind feasibility of a reaction and how they can be used for quantitative analysis of solutions using titrimetry, qualitative analysis of organic and inorganic compounds, galvanic cells, reaction kinetics, solubility,; accuracy and precision related to measurements; presentation of information on a given related topic to a wider audience; problem solving session- mapping of the shortest pathway for qualitative analysis from the given information</p>	
Teaching Learning methods	<p>Self- learning: Course material in print (12 Sessions), Online components, Recommended readings</p> <ul style="list-style-type: none"> • Compulsory contact sessions: Laboratory classes • On line quiz • Presentations • Practical tests + Quizzes 	
Assessment strategy	Overall CA Mark (OCAM): 40%	Final Assessment: 60%
	Part I > or = 50%, Part II > or = 50%	1 paper (MCQ, SEQ, Essay) - 2hrs- 100%
	OCAM= Average of Part I and Part II	
Recommended Readings:	<ol style="list-style-type: none"> 1. <u>Mendham J., Denney R. C., Barnes J. D., Thomas M.J.K., (1989),</u> Vogel's Qualitative Chemical Analysis , John Wiley and Sons Inc, 6th Ed. 2. Svehla G., (1996), Vogel's Quantitative Chemical Analysis, Prentice Hall, 7th Ed. 3. CMU 1121 -OUSL publication 	