<table>
<tr><td>Level</td><td colspan="6">Level - 05</td></tr>
<tr><td>Course Synopsis
Course Code</td><td colspan="6">CYU5307</td></tr>
<tr><td>Course Title</td><td colspan="6">Chemical Aspects of Food Industry</td></tr>
<tr><td>Credit value</td><td colspan="6">3 credits</td></tr>
<tr><td>Core/Optional</td><td colspan="6">Optional</td></tr>
<tr><td>Prerequisites</td><td colspan="6">CYU5304 (CR) / CYU5304 Valid OCAM + CYU 3302 Pass or CMU3124 (EL/CR)</td></tr>
<tr><td rowspan="2">Hourly Breakdown</td><td colspan="2">Theory</td><td>Practical hours</td><td>Independent Learning</td><td>Assessments</td><td>Total hrs</td></tr>
<tr><td>20 Sessions × 2 = 40 hrs</td><td>2 DS + 1 RDS

hrs = 4×3 = 12 hrs</td><td>Lab 3 days hrs = 7 × 3 = 21 hrs</td><td>▪ Sessions (20 x 3) = 60 hrs
▪ Online / Audio-visual materials and other learning resources = 8 hrs
▪ Field visit =7 hrs</td><td>▪ 2 Continuous Assessments (CA) × 1 hr =2 hrs</td><td>150 Hrs</td></tr>
<tr><td>Course Aim/s</td><td colspan="6">To develop an understanding of the theoretical and practical knowledge in food chemistry focusing on the macronutrients and micronutrients and to develop an understanding of the interrelationship between food processing, safety and quality in industry and apply the principles of hygienic food handling and to understand the Food Act of Sri Lanka.</td></tr>
<tr><td>Programme Learning Outcomes (PLO) addressed by course</td><td colspan="6">PLO1:Theoritical Knowledge: Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the BSc degree.
PLO2: Practical Knowledge and Application. Acquire competency in practical skills and the necessary knowledge to appropriately use these skills.
PLO3: Communication: Communicate reliably, efficiently and effectively to present information, ideas and concepts to the scientific community as well as to the wider society.
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.
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.</td></tr>
<tr><td>Course Learning Outcomes (CLO):</td><td colspan="6">CLO1: Descried what are the major and minor constituents of food, their properties and how these properties are make use in food industry. (PLO1)
CLO2: Describe how the knowledge of properties of food constituents and their Chemistry is being used for various industrial processes. (PLO1)
CLO3: Describe the Legal requirements for food safety and suitability. Further this provides a good understanding of food laws and regulations and Food Act of Sri Lanka. (PLO1)
CLO4: Describe the theory and procedures required in understanding some of the experiments (proximate analysis of food) pertaining to the Analysis of Food constituents. (PLO1)
CLO5: Develop the practical knowledge and skills used in a Food Chemistry laboratory. (PLO2)
CLO6: Maintain good laboratory practice and safety in a laboratory. (PLO2)</td></tr>
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	CLO7: Perform effectively through student presentation on a given title related to Food Chemistry within a given time as an individual and as a group work and Industrial visit to a food related industry. (PLO3, PLO4 and PLO5)	
Content (Main topics, sub topics)	Major and minor constituents of food, their properties and how these properties are made use in food industry; Main groups of food constituents such as carbohydrates, protein and lipids along with their applications in industry; The importance of water and the role of water in food; Importance of other food constituents such as minerals, trace elements and enzymes; Food additives and E numbering and INS numbering of food additives; Food adulterants, General introduction to food processing**;** processing of different food categories where the processing method/methods are highlighted; milk processing techniques and some milk products through Fermentation and manufacturing of Butter; Egg and egg products; meat and meat products; fish and fish products; processing of cereals, Legal requirements for food safety and suitability and Food Act of Sri Lanka and allied regulations; Good Manufacturing Practices (GMP), a set of principles and procedures that should be followed by the manufacturers of goods in manufacturing products. Good Hygienic Practices (GHP), a set of practices tied up with the GMP which ensures the safety aspects of a product. Food safety management system known as Hazard Analysis Critical Control Points (HACCP), which is an important aspect in food manufacturing, The importance of food analysis and topics directly related to food analysis to ensure the product quality management. Understanding and analyzing the moisture content in different food sources and to obtain practical knowledge and skills. Characteristics of various ashing procedures and to study dry ashing method as the major type of ashing required in proximate analysis. Understanding and analyzing the protein content of food by using methods available to quantify the protein content in food. Understanding and analyzing the fats/oils content in different food sources.	
Teaching-Learning methods	Self-learning: • Instructional material (IL) • Online activities, a MOODLE supplementary based course (OL) Compulsory contact sessions: • Laboratory training (3 days Lab session) • Assessments: MCQs (MCQ), structured essay (SEQ) and essay (ES) Non-compulsory contact sessions: • Day school (DS) • Field visit	
Assessment Strategy	Overall Continuous Assessment Mark (OCAM): 40%	Final Assessment: 60 %
	Practical Assessment Mark (P.A.M): $P.A.M. \geq 50\%$ Theory Assessment Mark (T.A.M.): $T.A.M. \geq 35\%$	Final Evaluation Theory examination – 2h
Recommended Reading	1. Any research related article or journal paper	