

SUMMARY OF INFORMATION ON EACH COURSE

1.	Name of Course	Organic Chemistry							
2.	Course Code	POC 0335							
3.	Status of Course [Applies to (cohort)]	Core for Foundation in Life Sciences							
4.	MQF Level/Stage Note : Certificate – MQF Level 3 Diploma – MQF Level 4 Bachelor – MQF Level 6 Masters – MQF Level 7 Doctoral – MQF Level 8	Foundation (Certificate – MQF Level 3)							
5.	Version (State the date of the Senate approval – history of previous and current approval date)	Date of previous version: October 2011 Date of current version: June 2014							
6.	Pre-Requisite	None							
7.	Name(s) of academic/teaching staff	Ho Sew Tiep, Radziah Shaikh Abdullah							
8.	Semester and Year offered	Trimester 3							
9.	Objective of the course in the programme : To expose students to fundamental principles of organic chemistry with special emphasis on the properties and reactions of various classes of organic compounds.								
10.	Justification for including the course in the programme : To provide fundamental knowledge and skills required for further learning in the field of the Life Sciences.								
11.	Course Learning Outcomes :		Domain			Level			
	LO1 Describe the structure and nomenclature of various organic compounds.		Cognitive			Level 1			
	LO2 Define the physical properties of various organic compounds.		Cognitive			Level 1			
	LO3 Apply various important reactions.		Cognitive			Level 3			
	LO4 Comprehend the chemistry of carbohydrates, amino acids, proteins and lipids.		Cognitive			Level 2			
12.	Mapping of Learning Outcomes to Programme Outcomes :								
	Learning Outcomes	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
	LO1	X	X						
	LO2	X							
	LO3	X	X						
	LO4	X	X						

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13.	Assessment Methods and Types :				
	Method and Type	Description/Details			Percentage
	1 Quiz	Quizzes with short structured questions or MCQ			10%
	2 Assignment	Assignments with short structured questions			10%
	3 Lab Reports	Lab reports with short structured questions			10%
	4 Test	Written examination			20%
	5 Final Examination	Written examination			50%
14.	Mapping of assessment components to learning outcomes (LOs)				
	Assessment Components	LO1	LO2	LO3	LO4
	Quiz	10	12.5	10	14.3
	Assignment	10		10	14.3
	Lab Reports	10		10	
	Test	20	25.0	20	
	Final Examination	50	62.5	50	71.4
15.	Details of Course				
	Topics	Mode of Delivery (eg : Lecture, Tutorial, Workshop, Seminar, etc.) Indicate allocation of SLT (lecture, tutorial, lab) for each subtopic			
		Lecture	Tutorial	Lab	
	1 Introduction: Bond Angles and Shape of Molecules, Polar and Nonpolar Molecules, Resonance, Functional Groups, Isomerism, Chirality	3	1		
	2 Alkanes and Cycloalkanes: Introduction, Structure of Alkanes, Constitutional Isomerism in Alkanes, Nomenclature of Alkanes, Cycloalkanes, The IUPAC System of Naming, Cis-trans Isomerism in Cycloalkanes, Physical Properties of Alkanes and Cycloalkanes, Reactions of Alkanes	3	1	1	
	3 Alkenes and Alkynes: Introduction, Structure , Nomenclature, Physical Properties , Reactions of Alkenes	3	1	1	
	4 Alcohols and Haloalkanes: Structure, Nomenclature, Physical Properties of Alcohols, Reaction of Alcohols	3	1	2	

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5 Benzene and Its Derivatives: The Structure of Benzene, The Concept of Aromaticity, Nomenclature, Reactions of Benzene : Oxidation at benzylic Position, Reactions of Benzene : Electrophilic Aromatic Substitution, Aromatic Substitution, Disubstitution and Polysubstitution	3	1	
6 Aldehydes, Ketones and Amines: Structure, Nomenclature, Physical Properties, Reactions of Aldehydes and Ketones, Oxidation of Aldehydes and Ketones, Reduction of Aldehydes and Ketones, Reaction of Primary Aromatic Amines with Nitrous Acid	3	1	2
7 Carboxylic Acids and Derivatives: Structure, Nomenclature, Physical Properties, Acidity, Preparation of Carboxylic Acids, Reduction, Esterification, Conversion to Acid Chlorides, Hydrolysis of Carboxylic Acid Derivatives	3	1	2
8 Carbohydrates: Introduction, Monosaccharides, The Cyclic Structure of Monosaccharides, Reaction of Monosaccharides	2	1	
9 Amino Acids, Proteins, and Lipids: Introduction, Amino Acids, Reactions of Amino Acids, Isoelectric Point, Electrophoresis, Polypeptides and Proteins, Triglycerides, Soaps and Detergents, Phospholipids	2	1	
Total	25	9	8
Total Student Learning Time (SLT)	Face to Face / Guided Learning		Independent Learning
Lecture	25		25
Tutorials	9		9
Laboratory/Practical	8		4
Presentation	0		0
Assignment	-		10
Mid Term Test	1		4
Final Exam	2		20
Quizzes	3 times		3
Sub Total	45		75
Total SLT	120		
16. Credit Value	3		
17. Reading Materials :			
Textbooks			
Brown, W.H. (2014). <i>Introduction to Organic Chemistry</i> (5 th Ed). New York: Wiley.			

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Reference Material (including 'Statutes' for Law)

Wade, L. G. (2013). *Organic Chemistry* (8th Ed). Prentice Hall

Karty, J. (2012). *Get Ready for Organic Chemistry* (2nd Ed.). Prentice Hall.

McMurry, J.E. (2011). *Fundamentals of Organic Chemistry*. Belmont, CA: Brooks/Cole.

Smith, J.G. (2011). *Organic Chemistry* (3rdEd). McGraw–Hill Higher Education.

Appendix (to be compiled when submitting the complete syllabus for the programme) :

1. Mission and Vision of the University and Faculty
2. Programme Objectives or Programme Educational Objectives
3. Programme Outcomes (POs)
4. Mapping of POs to the 8 MQF domain
5. Summary of the Bloom's Taxonomy's Domain Coverage in all the Los in the format below :

Subject	Learning Outcomes (please state the learning Outcomes)	Bloom's Taxonomy Domain		
		Affective	Cognitive	Psychomotor
ABC1234	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			
DEF5678	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			

6. Summary of LO to PO measurement
7. Measurement and Tabulation of result for LO achievement
8. Measurement Tabulation of result for PO achievement