1.	Name of Course/Module	Systems Analysis and Design
2.	Course Code	TIS 2211
3.	Status of Subject	Core for B. Sc Bioinformatics
4.	MQF Level/Stage	Bachelor Degree – MQF Level 6
5.	Version (state the date of the last Senate approval)	June 2012
6.	Requirement for Registration	Database Systems (TDB 2111)
7.	Name(s) of academic/teaching staff	Liew Tze Hui Neo Han Foon Ong Lee Yeng
8.	Semester and Year offered	Trimester 1 (Gamma level)

9.	Objective of the course/module in the programme :
	To provide students with concepts and skills needed to analyze and design information systems covering major steps of a complete system development life cycle.

10.	Learning Outcomes :
	At the completion of the subject, students should be able to: LO1: Define the processes/ phases that carry out in system analysis and design (SAD) (Cognitive, Level 1). LO2: Explain the structured work and processes in planning, analysis, design and implementation (Cognitive, Level 6). LO3: Apply the techniques and methods used in system development environment (Cognitive, Level 3). LO4: Create documentation for software project that used the SAD practices (Cognitive, Level 5).

11.	Synopsis:
	The subject describes the concepts and skills needed to analyze and design information systems covering major steps of a complete systems development life cycle. Subjek ini menerangkan konsep dan kemahiran yang diperlukan untuk menganalisis dan rekabentuk sistem maklumat yang merangkumi fasa-fasa kitar hayat pembangunan sistem

12.	Mapping of Subject to Programme Outcomes :	
	Programme Outcomes	% of Contribution
	PO1: Apply soft skills in work and career related activities	27.27
	PO2: Demonstrate knowledge and understanding of fundamental concepts, principles and best practices	18.18
	PO3: Analyse the requirements to address problems or opportunities in relevant domains or organisations	36.36
	PO5: Blend innovative mind and entrepreneurial skills	18.18

13.	Assessment Methods and Types :		
	Method and Type	Description/Details	Percentage
	Test	Written Exam	20%
	Project	Report	15%
	Quiz	Written Exam	5%
	Final Exam	Written Exam	60%

14.	Details of Subject		

Topics	Mode of Delivery	
	Lecture	Tutorial
1. Foundation for Systems Development The system development environment. The origins of software, managing the information systems project, determining feasibility and managing analysis and design activities.	4	2
2. Information Requirements and Planning Information gathering, identifying and selecting systems development projects, initiating and planning systems development projects, assessing project feasibility, determining project benefits and costs.	6	3
3. Analysis Process Determining system requirements, structuring system process requirements, using data flow diagrams, structuring system logic requirements, structuring system data requirement, conceptual data modeling and E-R model, business rules.	8	4
4. Design Phase Designing databases, designing forms and reports, designing interfaces and dialogues, finalizing design specifications, designing distributed and internet systems.	6	3
5. Implementation and Maintenance System implementation, software application testing, documenting the system, maintaining information systems, conducting systems maintenance .	4	2
Total	**28**	**14**

15.	Laboratory

- Descriptions of Systems Development
- Descriptions of Information Requirements Analysis and Planning
- Implementation using data flow diagrams, conceptual modeling and E-R model
- Designing databases, forms, reports and interfaces
- Implementation of system documentation and maintenance

16.	Total Student Learning Time (SLT)	Face to Face (Hour)	Total Guided and Independent Learning
	Lecture	28	28
	Tutorials	14	14
	Laboratory/Practical		
	Presentation		
	Project	-	10

	Mid Term Test	1	5
	Final Exam	2	20
	Quizzes	2 times	2
	Sub Total	45	79
	Total SLT	124/40 = 3.1 => 3	
17.	Credit Value	3	
18.	Reading Materials :		
	Textbook	Reference Materials	
	1. J.A Hoffer, J.F. George, & J.S. Valacich, "Modern Systems Analysis and Design", 5/E, Prentice Hall, 2007, ISBN: 0132240769.	1. Kendall & Kendall, "System Analysis and Design", 7/E, Prentice Hall, 2010. ISBN: 013608916X. 2. Whitten & Bentley, "System Analysis and Design Methods", 7/E, Irwin Publishing, 2007, ISBN: 0073052337.	
2.	Appendix (to be compiled when submitting the complete syllabus for the programme) : 1. Mission and Vision of the University and Faculty 2. Mapping of Programme Objectives to Vision and Mission of Faculty and University 3. Mapping of Programme Outcome to Programme Objectives 4. Programme Objective and Outcomes (Measurement and Descriptions)		