



## UNIVERSITI MALAYSIA SARAWAK

### PROGRAMME SPECIFICATION

1. Name of the Award : Bachelor of Computer Science (Network Computing)(Hons)
2. Credit Value : 130
3. Type of Award : Single Major
4. Awarding Institution : Faculty of Computer Science and Information Technology, Universiti Malaysia Sarawak (UNIMAS)
5. Field of Study : Communication, Computer System, and Network
6. Language of Instruction : English
7. Mode of Study : Full-Time
8. Mode of Delivery : Lecture, tutorial, laboratory, individual/group work, case study, presentation, industrial training, and final year project.
9. Method of Delivery : Conventional

10. Duration of Study :

	Full-Time		Part-Time	
	Long Semester	Short Semester	Long Semester	Short Semester
No of Weeks/Sems	14	-	-	-
No of Sems/Years	2	-	-	-
No of Years	4 (max. 6)		-	

11. Entry Requirements :
- i. Pass in Sijil Pelajaran Malaysia (SPM)/equivalent with at least Credit in Bahasa Melayu/Malaysian Language, Mathematics, and English Language/English 1119 subjects (or July papers);
  - ii. Pass in:
    - Sijil Tinggi Persekolahan Malaysia (STPM, at least CGPA 2.00) with minimum Grade C (Subject Grade Point, SGP 2.00) in *Pengajian Am* and in any other three subjects including Mathematics T, Further Mathematics T, or Computing; or
    - KPM Matriculation / UM Science Foundation Studies / UiTM Foundation Studies (at least CGPA 2.00) with minimum Grade C (SGP 2.00) in any three subjects including Mathematics or Engineering Mathematics; or
    - Diploma or others in relevant fields which are recognized by the Malaysian government and approved by IHL Senate.
  - iii. At least Band 1 in Malaysian University English Test (MUET).

12. Programme Objectives : This program is aimed for :
- i. Producing graduates who are founded in the core knowledge of computer science,
  - ii. Bearing graduates who can think critically and possess high ability to solve problem,
  - iii. Equipping graduates by showing noble professionalism, value and ethics as well as moral,
  - iv. Producing graduates who can demonstrate knowledge sharing ability and obtain latest information and skills,
  - v. Bringing out graduates who have leadership ability and high knack in themselves, and
  - vi. Producing pro-active graduates who are sensitive to the needs of community from time to time.

13. Programme Learning Outcomes (PLOs) : After graduating from this program, the students are able to:
- i. Predominate the knowledge of network computing,
  - ii. Perform technical and programming skills in system design, development, configuration, and integration,
  - iii. Manage communication skills,
  - iv. Present creative and innovative solutions in relative to problems which need suitable scientific approach,
  - v. Build teamwork skills as well as social responsibility and skills,
  - vi. Find and manage information and perform life-long learning,
  - vii. Build and explore knowledge and skills in entrepreneurship,
  - viii. Practise professionalism, value, attitude, and ethical behaviour, and
  - ix. Demonstrate leadership skills.

14. Classification of Subjects :

No	Course Type	No of Courses	Credit	Credit Percentage
1	Generic Courses	9	12	9.2
2	Faculty Core Courses	17	50	38.5
3	Program Core Courses	12	36	27.7
4	Industrial Training	1	12	9.2
5	Final Year Project I & II	2	8	6.2
6	Elective Courses (from other faculties)	4	12	9.2
	Total	45	130	100

15. Programme Structure :

(a) First Year Courses

Component	Semester 1		Semester 2	
	Subject	Credit	Subject	Credit
Generic Course	<b>TMX1010</b> – End User Computing * <b>PBI0011</b> – Preparatory English 1 **	0 0	<b>TMX2012</b> – IT Tools for Knowledge Workers <b>PBI0021</b> – Preparatory English 2 **	2 0
Faculty Core Course	<b>TMC1213</b> – Computer Architecture <b>TMC1233</b> – Operating Systems <b>TMC1413</b> – Introduction to Programming <b>TMC1813</b> – Discrete Mathematics <b>TMC1833</b> – Calculus <b>TMP1613</b> – Multimedia Technology	3 3 3 3 3 3	<b>TMC1013</b> – System Analysis and Design <b>TMC1253</b> – Communication and Computer Network <b>TMC1433</b> – Data Structure and Algorithms <b>TMC1853</b> – Linear Algebra	3 3 3 3
Elective Course			Elective Course I	3
<b>Total</b>	<b>8</b>	<b>18</b>	<b>7</b>	<b>17</b>

\* IT Strengthening Course – will be exempted if students passed the IT Proficiency Test (UPIT) which is usually held during early Semester 1.

\*\* Preparatory English Courses – will be exempted if students get Band 4 and above in Malaysian University English Test (MUET).

(b) Second Year Courses

Component	Semester 1		Semester 2	
	Subject	Credit	Subject	Credit
Generic Course	<b>SSX0012</b> – Islamic and Asian Civilization <b>PBI1012</b> – English for Professional Purposes <b>PBM2022</b> – Malaysian Language	2 2 2	<b>SSX0022</b> – Ethnic Relations <b>PBI1032</b> – Academic Reading and Writing	2 2
Faculty Core Course	<b>TMC2033</b> – Database Concept and Design <b>TMC2813</b> – Introductory Statistics	3 3	<b>TMC2413</b> – Object Oriented Software Development	3
Programme Core Course	<b>TMN2013</b> – Microcomputer Interfacing	3	<b>TMN2073</b> – Computer Security <b>TMN2093</b> – Computer System Administration and Management <b>TMT2013</b> – Multimedia Programming	3 3 3
Elective Course	Elective Course II	3	Elective Course III	3
<b>Total</b>	<b>7</b>	<b>18</b>	<b>7</b>	<b>19</b>

## (c) Third Year Courses

Component	Semester 1		Semester 2	
	Subject	Credit	Subject	Credit
Faculty Core Course	TMC3012 – Ethics and Professionalism TMC3613 – Web Based System Development TMP3113 – Project Management	2 3 3	TMY3912 – Industrial Training	12
Programme Core Course	TMN3033 – Network Performance and Simulation TMN3053 – System Programming TMP3213 – Internetworking Technology Laboratory	3 3 3		
<b>Total</b>	<b>6</b>	<b>17</b>	<b>1</b>	<b>12</b>

## (d) Fourth Year Courses

Component	Semester 1		Semester 2	
	Subject	Credit	Subject	Credit
Faculty Core Course	TMC4013 – Technopreneurship and Product Development TMP4913 – Final Year Project I	3 3	TMP4935 – Final Year Project II	5
Programme Core Course	TMN4013 – Distributed System TMN4033 – Embedded System	3 3	TMN4053 – Broadband Network Technology TMN4073 – Wireless and Mobile Networks TMN4093 – Advanced Topics in Computer Networking	3 3 3
Elective Courses	Elective Course IV	3		
<b>Total</b>	<b>5</b>	<b>15</b>	<b>4</b>	<b>14</b>
<b>TOTAL</b>	<b>26</b>	<b>68</b>	<b>19</b>	<b>62</b>

In addition, during semester breaks (December and May-June), the faculty also offers special programs and IT certification courses, such as 3P Program, CISCO, Oracle, Infosys, and Satyam, to increase knowledge and skills of the students.

16. Career Prospects : Computer Network / System Administrator, System Programmer, Network / Communication Consultant, Network Support Officer, System / Network Engineer, and any other Computer Science or Information Technology (ICT) related jobs.
17. Facilities Available : Hostels, Library/Resource Center, Student Interaction Room, Laboratories, Gymnasium, etc.