The University of the Gambia

(School of Information Technology and Communication)

BSc. (Hons) Computer Science

Study Plan Year 1

Semester I					
Semester I	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
	GEL 101	Use of English I	3	None	GER
	MTH 101	Calculus I	3	Pre-Calculus	GER
	ICT 101	Introduction to I.C.T.	3	None	DER
	ICT 102	Introduction to Computing & I.S	3	None	DER
	ICT 103	Programming Logic and Design	3	None	DER
	ICT 104	Report Writing and Presentations	3	None	DER
		Total	**18**		

Semester II					
Semester II	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
	GEL 102	Use of English 102	3	GEL 101	GER
	SCI 101	Introduction to General Science	3	None	GER
	MTH 102	Calculus II	3	MTH 101	DER
	GER 107	Cultural Studies	3	CPS 101	GER
	ICT 105	Computer Programming I	4	CPS 103	DER
	ICT 106	Ethics for Computing and Engineering	3	None	DER
		Total	**19**		

Study Plan Year 2

Semester I					
Semester I	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
	FRE 101	Elementary French I or any Foreign	3	None	GER
	PHY 101	Fundamentals of Physics I	3	MTH 102	DER
	ICT 201	Computer Architecture & Organization	3	CPS 104	DER
	ICT 202	Computer Programming II	4	CPS 104	DER
	ICT 203	Computer Networking I	3	INS 102	DER
	ICT 204	Database Systems I	4	CPS 104	DER
		Total	**20**		

Second Year Semester II					
Semester II	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
	FRE 102	Elementary French II or any Foreign	3	FRE 101	GER
	Social and Behavioral Sciences (*Choose 1 Course*)		3	None	GER
	Humanistic Tradition (*Choose 1 Outside Major*)		3	None	GER
	MTH 301	Probability and Statistics	3	MTH 102	DER
	ICT 205	Data Structure & Algorithms	4	CPS 202	DER
	ICT 206	Principles of Operating System	3	CPS 202	DER
		Total	**19**		

Study Plan Year 3

Semester I					
Semester I	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
		Social and Behavioral Sciences *(Choose 1 Course)*	3	None	GER
		Economics & Mgt. Tradition *(Choose 1 Course)*	3	None	GER
	ICT 301	Project Management	3	INS 101	DER
1	CPS 301	Computer Networking II	3	CPS 203	MAJOR
2	CPS 302	Internet and Web Programming I	3	CPS 202	MAJOR
3	CPS 303	Microprocessor Principles	3	CPS 204	MAJOR
		Total	**18**		

Semester II					
Semester II	**Course #**	**Title**	**Credit Hours**	**Prerequisite**	**Fulfills**
4	CPS 304	Internet and Web Programming II	3	CPS 202	MAJOR
5	CPS 305	Computer Logic and Discrete Structures	3	CPS 204	MAJOR
6	CPS 306	Automata and Languages	3	CPS 204	MAJOR
7	CPS 307	Object Oriented Analysis and Design	3	CPS 202	MAJOR
8	CPS 308	Computational Mathematics	3	MTH 102	MAJOR
9	CPS 401	Advance Programming Skills	3	CPS 307	MAJOR
		Total	**18**		

Study Plan Year 4

Semester I					
Semester I	Course #	Title	Credit Hours	Prerequisite	Fulfills
10	CPS 402	Parallel and Distributed Programming	3	CPS 307	MAJOR
11	CPS 403	Artificial Intelligence	3	CPS 202	MAJOR
12	CPS 404	Cloud Computing	3	CPS 307	MAJOR
13	CPS 405	Data Communications and Network	3	CPS 301	MAJOR
14	MTH 203	Linear Algebra	3	MTH 102	MAJOR
15	CPS 406	Research Method in IT	3	ICT 104	MAJOR
		Total	**18**		

Semester II					
Semester II	Course #	Title	Credit Hours	Prerequisite	Fulfills
15	CPS 407	Compiler Design and Interpreters	3		MAJOR
17	CPS 408	Project/ Dissertation	6		MAJOR
	400 Level	Electives	3		ELECTIVE
	400 Level	Electives	3		ELECTIVE
	400 Level	Electives	3		ELECTIVE
	400 Level	Electives	3		ELECTIVE
		Total	**21**		ELECTIVE

Elective Courses

CPS 409   LAN Administration
CPS 410   Computability and Complexity
CPS 411   Advance Database Systems
CPS 412   Advance Application Development
CPS 413   Operating Systems II and Distributed Computing
CPS 414   Design of Web-Based Systems
CPS 415   Advanced Object-Oriented Analysis and Design
CPS 416   Intelligent Systems
CPS 417   Information Security and Ethical Hacking
CPS 418   Big Data Analytics

A. GER - GENERAL EDUCATION REQUIREMENTS [36 CREDIT HOURS]

Writing Competence	GEL 101 : Use of English 1 *and* GEL 102 : Use of English 2	6 semester hours
Mathematics competence	MTH 103: Basic Mathematics *or* MTH 101 : Calculus 1*(for all science students)*	3 semester hours
Information Technology Competence	CPS 111: Introduction to Information Communication Technology (ICT)	3 semester hours
Foreign Language Competence	Any language offered except English : FRE 101: Elementary French 1 and FRE 102: Elementary French 2 *or* ARB 101: Arabic Reading and Writing Skills 1 and ARB 102: Arabic Reading and Writing Skills 2 *or* SPA 101 : Elementary Spanish 1 and SPA 102 : Elementary Spanish 2 *(Note: Students doing a Major/Minor in French or Islamic Studies should do FRE 103 and FRE 104; ARB 103 and ARB 104, respectively)*	6 semester hours
Humanistic Tradition	GER 107: Cultural Studies plus one other course *outside the student's major area*. The course may be in History, Literature, Philosophy, Law, Religious Studies (i.e. Islam or Christianity).	6 semester hours
Social and Behavioural Sciences	Two courses in the following areas: Psychology, Anthropology, Geography, Political Science, Sociology, Development and Gender Issues.	6 semester hours
General Science Competence	SCI 101: Introduction to General Science	3 semester hours
Economics and Management Tradition	MGT 100: Introduction to Management *or* ECO 200: Economics of Development	3 semester hours