UNIVERSITY OF THE GAMBIA
DEPARTMENT OF SCIENCE AND TECHNOLOGY
SEPTEMBER 2006

BRIEF DESCRIPTION OF COMPUTER SCIENCE (CPS) MAJOR AND MINOR

There is a significant, undisputed need in The Gambia for teachers and skilled workers who possess a strong background in both Computer Science theory <u>and</u> practical applications. To help fill this urgent need, in the 2006-2007 school year The University of The Gambia (UTG) will begin offering a Bachelor's in Science (BSc) with a major or minor in Computer Science (CPS).

The UTG CPS major and minor programs aim to give students an international-quality Bachelor's-level theoretical understanding of the field of Computer Science with a strong emphasis on the practical applications encountered in today's business of Information Communication Technology. With this degree, students will have the foundational knowledge necessary to begin a career in computer programming, development, and design, or further their studies with a Master's or PhD.

The core of the Computer Science curriculum aims to provide a broad overview of computer science theory, programming, and computing architectures, with an offering of electives allowing the students deeper study in a variety of current, relevant topics in the field of Computer Science.

Students wishing to graduate from the University of The Gambia with a Bachelor's in Science with a major or minor in Computer Science must complete a minimum of 120 credit hours including all general education requirements of the University of The Gambia, all departmental requirements of the Department of Science and Technology, and 40 credit hours in the twelve (12) Computer Science core courses which include: **Introduction to Information Communication Technology (ICT), Introduction to Computer Science, Computer Programming I & II, Computer Logic and Discrete Structures, Data Structures and Functional Programming, Computer Architecture, Theory of Computing I & II, Operating Systems I & Systems Programming, Database Systems, and Computer Networking I.**

Students wishing to graduate with a major in Computer Science must also complete twenty (20) additional credit hours including the five (5) credit hour CPS 401 year-long senior research and development project and a total of at least fifteen (15) additional credit hours in Computer Science elective courses which may include: **Web Programming, Advanced Topics in ICT, Operating Systems II & Distributed Computing, Compilers, Computer Networking II, Artificial Intelligence (AI), Math-based Computing / Numerical Analysis (MATLAB / SCILAB), and Computer Graphics.**

Admission to the Computer Science major or minor requires the student be admitted to the Department of Science and Technology at the University of The Gambia and to have obtained at least a grade of 'C' in each of the following introductory courses in Computer Science: CPS111 (Intro. to ICT), CPS 101 (Computer Programming I), and CPS122 (Intro. to Computer Science).