THE UNIVERSITY CENTRE FOR STUDIES IN NAMIBIA

TUCSIN

TUCSIN Alumni 2013

"I think a lot of folks growing up today, when they open a computer, it's like opening a refrigerator. It's an appliance, it's white goods, there's some stuff in it, if it needs more in it you stock it, you put more music in it, you play it. And If it breaks it's: 'Mom, can I have a new one'. It's not actually 'what went wrong there? Let me go in there, lets look at the log files, what crashed, why didn't it have the right permissions, lets see if we can re-write that script so that it works in the new version of the operating system.'" - Berners—Lee

What is Computer Science?

Inside this issue:

"The best programs are written so that computing machines can perform them quickly and so that human beings can understand them clearly. A programmer is ideally an essayist who works with traditional aesthetic and literary forms as well as mathematical concepts, to communicate the way that an algorithm works and to convince a reader that the results will be correct."
— Donald E. Knuth,

Computer scientists not only understand the intricate innards of a computer, they also know how to write programs and have an intimate knowledge of everything relating to computers.

Computer scientists can be involved in all dimensions of computers, including: hardware electronics, operating systems, artificial intelligence, communication related information such as programming languages, and all aspects of applications, that is, software.

When employed, computer scientists may specialize in hardware, programming or theory. They can also develop virtual reality in robotics. However, they tend not to specialize in only one field and are, therefore, sought after as employees. There has been much debate about definitions for this subject area. Some examples of these are: computer science is the study of computers and the major phenomena that surround them;

Computer science is the body of knowledge concerned with computers and computation; computer science is the study of knowledge representations and their implementations; and computer science is the study of abstraction and the mastering of complexity.

In one sense, it is easier to define what computer science is not. It is not the study of programming, as that is too limited. It is not learning to use computer applications (word processing or spreadsheet packages).

Computer science has been defined as the discipline of computing the systematic study of algorithmic processes that describe and transform information: their theory, analysis, design, efficiency, implementation and application. Computer scientists need to understand the science that underlies the software aspect of computer systems and the interrelationship between software and hardware systems, as well as issues related to efficiency and usability,

with most emphasis usually placed on software.

When studying computer science, emphasis is usually placed on the analysis and design of algorithms, which are a generalized form of representing problem solutions. Computer scientists need to be able to analyse and solve problems, by finally translating their solutions into particular software tools and a given computer environment.

Some computer scientists end up in managerial positions as leaders of information systems development projects or Management Information Systems (MIS) managers. They often act as facilitators between software developers and clients.

Computer Science Education and Career Paths

Requirements
- excellent problem solving skills
- teaching ability, being able to explain solutions
- great interest in computers
- highly intelligent and logical thinker
- able to work independently and in a team
- high degree of concentration
- patient and persistent
- good mathematical skills
- enjoy putting information into logical sequence

School Subjects
Requirements for a degree course
Each institution will have its own minimum entry requirements.
Compulsory Subjects: Mathematics
Recommended Subjects: Physical Sciences, Information Technology
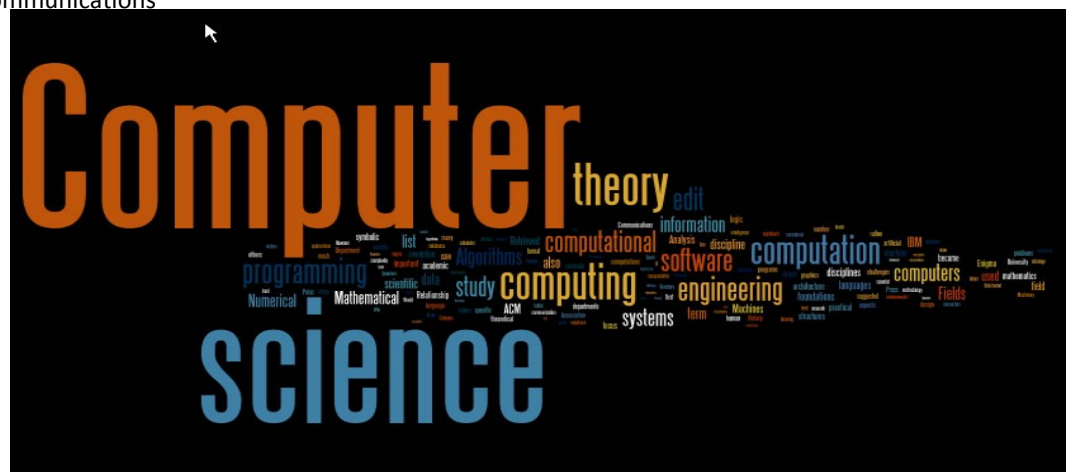
Training
Degree: BSc with majors such as Information Technology, Electronic Engineering - most universities. Also Bachelor of Information Technology degrees are offered at some universities - UNAM , RU, UCT, UWC, NMMU, UFS, Wits, US, UP, UNISA, UKZN, UJ. UZ, UFH, NWU, Monash.

The more theoretical majors lead to specialized work in computer science and programming.

Employer
- software houses
- financial institutions
- insurance industry
- scientific, research and educational institutions
- government departments and organizations
- non-governmental organizations
- mining companies
- manufacturing facilities
- transport systems and telecommunications
- Internet service providers.

The following proud alumni are examples of Computer Science

Ms Kauna Mufeti

Kauna Mufeti holds a Master of Science Degree in Computer Science from Rhodes University, South Africa. She is currently a Computer Science lecturer at the University of Namibia and the Acting Coordinator: Interactive Multimedia Unit (IMMU). The IMMU provides technical support for integrating technology into the teaching and learning activities of the University. Mufeti has been responsible for coordinating the activities of the Multimedia Production Studio, eLearning and technology-enhanced collaboration projects. Her current area of research is the use of Virtual solutions for capacity building in developing countries.

Ms Mufeti received a DAAD scholarship through the auspices of TUCSIN in 2001 - 2004

Ms Kauna Mufeti

2001 –2004 DAAD Grantee

Graduate with MSc Computer

Science from Rhodes University

Other Computer Scientists that Graduated or received funding with a DAAD Scholarship:

- Hedvig Iipito - Currently busy with MSC Information Technology
- Hafeni Mthoko - MCom Information Systems
- Martha Kamkuemah MSc Computer Science
- Shange Ndakunda - Junior Lecturer at Polytechnic of Namibia - PhD Computer Science
- Nico Stehle - BIS Multimedia
- Williema Nangolo—MSC Computer Science & Mathematics
- Hilya Angula - BSc Computer Science
- Nakashole Ndapandula - MSc Computer Science

Where to study Computer Science

UNIVERSITY OF NAMIBIA - DEPARTMENT OF COMPUTER SCIENCE

' (+264 61) 206 3519   7 (+264 61) 206 3791 : **jmbale@unam.na** * Private Bag 13301, Windhoek, Namibia

The Department of Computer Science at the University of Namibia offers Undergraduate and Postgraduate Computer Science and Information Technology Programmes. Apart from the regular curriculum modules, the Department runs CISCO and IT-Essential(s) courses to both regular and public students. The Department also runs a Virtual Classroom Project, under the South Africa – Norway Tertiary Education Development (SANTED) programme, In collaboration with the Rhodes University of South Africa.

University of Namibia requirements

To register for a B.Sc. undergraduate degree programme a candidate must hold a valid Namibian Senior Secondary Certificate (NSSC) (ordinary or higher) or a recognized equivalent qualification.

English is a **compulsory** subject and should normally have been obtained as a Second Language at NSSC (O level) with a minimum C symbol, or English as a First Language at NSSC (O level) with a minimum D symbol.

In addition to the above, admission to the B.Sc. course of study requires at least a symbol C on NSSC or equivalent qualification in Mathematics.

A candidate should obtain a minimum of 25 points on the UNAM Evaluation Point Scale in his/her five (5) best subjects (of which Mathematics and English must be included) to be admitted to undergraduate studies (Refer to the **General Admission Criteria for Undergraduate Programmes** in the **General Information and Regulations Yearbook**). Obtaining the minimum number of points, however, **does not necessarily ensure admission. Admission is based on places available in modules, subjects and programmes and is awarded on the basis of merit.**

Other Institutions

Department of Computer Science
Rhodes University
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South Africa

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Email: compsci@ru.ac.za

References : http://www.unam.na

http://www.ru.ac.za/computerscience

http://www.pacecareers.com

TUCSIN Alumni 2013

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We're on the web:
www.tucsin.org as
well as on Face book

Next week we will focus on Engineering