A REPORT ON RESEARCH METHODOLOGY AS A COURSE UNIT STUDIED AT MAKERERE UNIVERSITY UNDER THE PROGRAM COMPUTER SCIENCE

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1 Introduction

A Research Methodology provides a systematic way of solving a research problem. It is a science of studying how research is done scientifically. Scientific Research, involves pursuit of the truth by determining the logical interrelation between facts. Research Methodology is a 3 credit unit (CU) course unit. This course is lectured by Mr. Ernest Mwebaze.

2 Target Group

The course targets year two students pursuing Bachelor of Science in Computer Science. And it is taught in the second semester.

3 Description

The purpose of this course is to acquaint students with types of scientific research relevant for anyone working in the field of computer science. It will enable students to develop capacity to conduct small, simple research projects while at the university.

4 Aims

The aims of this course unit are to: Enable students become competent in understanding the research process; Provide skills that will enable students undertake independent research using a variety of appropriate methods, using primary and secondary data, as well as qualitative and quantitative techniques; Provide students with skills to produce a research proposal.

5 Learning outcomes

By the end of the course, students will be: Capable in their chosen professional, vocational or study areas to conduct research; Able to contribute in an entrepreneurial and innovative way within their business, workplace or community in the field of research; Able to operate effectively and ethically in conducting research in groups/teams Adaptable and manage change to handle different research situations according to different contexts; Aware of research and research methodology in subsequent years of study.

6 Intellectual, Practical and Transferable skills

At the end of the course, students should have the ability to demonstrate: Appreciation of the different functions and applications of scientific research in the

field of computer science; Basic knowledge of the different research methodologies relevant for computer science; Knowledge of which methods to use in what circumstances; Knowledge of what a research proposal entails; Application of quantitative and qualitative research methods and techniques; Judgment of the quality of research proposals as well as the products (articles, papers, theses etc.) of scientific research.

7 Teaching and Learning Pattern

Teaching will be in form of formal lectures, tutorials and seminars. Classes will be interactive and students are expected to come to class prepared to participate and contribute regularly to class activities and discussions.

8 Indicative Content

The content of this course will include: Introduction to scientific research; Formulating and clarifying the research topic and research problem; Conducting a literature review; Different research approaches; Ethics in research; Sampling; Use of secondary data; Collection methods for primary data; Analyzing qualitative data; Analyzing quantitative data and writing a research proposal and project report.

9 Assessment method

The course will be assessed by course work and tests (40

10 Reading List

(i) Cooper, H. (1998). Synthesizing Research: A Guide for Literature Reviews. Thousand Oaks, California: Sage

11 Conclusion

In general, Research is a process of systematic inquiry or investigation into a specific problem or issue that leads to new or improved knowledge. And it is conducted for the following reasons; For academic purposes; To solve a problem in the practical world; To find answers to questions; To acquire new knowledge, and much more.