**BIT 1205 Research Methodology (3 CU)**

**Course 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.

**Aims:** The aims of the course are to provide the student with:

• 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.

• Highlight ethical research practices to students.

**Learning Outcomes:** On completion of this course unit, the 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 and;

• Become aware of research and research methodology in subsequent years of study.

**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.

**Indicative content:**

• 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.

**Assessment method:** The course will be assessed by course work and tests (40%) and final examination

(60%)

**Reference Books:**

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

(ii) Research Methods for Students by Sounders, M, Lewis, P & Thornhill, A, 3rd edition, UK, Financial

times, Prentice hall 2003