JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY

INSTITUTE OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

REGULATIONS AND SYLLABUS
FOR THE
MASTER OF SCIENCE DEGREE IN SOFTWARE
ENGINEERING

1. JUSTIFICATION

Today, there is a shortage of taught, specialist Computer Science/Information Communication Technology (ICT) postgraduate programmes that are expressly designed to consider research problems encountered in real life business and industrial settings. It is this gap that the proposed Master of Science in *Software Engineering* seeks to fill thereby building appropriate capacity. In this programme, scholars will be given the necessary theoretical and conceptual foundation and thereafter be expected to proceed with research into problems that are experienced in the world. This focus will offer unique opportunities and solutions to key development problems thereby contributing to knowledge by responding to established and emerging challenges.

The *objectives* of the programme are:

(a) To create new opportunities for postgraduate research in Software Engineering

(b) To contribute to the production of Software Engineering/Information Technology professionals required at the various levels of development.

(c) To establish a proactive and relevant information communication technology (ICT) research and development community.

(d) To collaborate with industry to develop ICT products, systems and services that address key needs.

(e) To produce high quality education, research, systems and products that compete effectively at the global level

2. ENTRY REQUIREMENTS

2.1   The common regulations for the Masters degree in the University shall apply.

2.2   The minimum requirements for eligibility into the Master of Science in Software Engineering are:

    (a)   Holders of a Bachelor's degree in Computer Science/Computer Technology/Information Technology, Mathematics and Computer science, and Electronic Engineering of at least Upper Second Class Honours of JKUAT.

    (b)   Holders of a Bachelor's degree in a related discipline: Engineering, Mathematics, Statistics and Physics of at least Upper Second Class Honours and holds a Postgraduate Diploma in Computer Science of a minimum Credit grade from an institution recognized by senate or an equivalent qualification from an institution recognized by Senate.

    (c)   Any other qualification from an institution recognized by senate and equivalent to (a) and (b) above.

3. CREDIT TRANSFER

3.1   No candidate will be allowed to transfer more than one third of the total number of taught courses.

3.2   Application for exemption shall be considered only after the applicant has paid an exemption fee.

4. PROGRAMME STRUCTURE AND DURATION

4.1   The first academic year shall have two semesters. The second academic year shall be devoted to research leading to a Thesis.

4.2   The programme shall extend over a minimum period of eighteen months (four semesters) and a maximum period of four academic years.

4.3   The programme shall consist of twelve taught course units and a Thesis.

4.4   A course unit shall be defined as 35 lecture hours. 2 tutorial hours shall be equivalent to 1 lecture hour. 3 practical hours shall be equivalent to 1 lecture hour.

4.5   A candidate shall take all the twelve course units by course work, and carry out research leading to a Thesis.

4.6   The   research   project   shall   be   equivalent   to   ten   course   units.