COLLEGE OF ARCHITECTURE AND ENGINEERING

Principal: College Bursar:

Prof. P.M. Ngau, BEd (KU), MA, (Nairobi), PhD, (UCLA) College Registrar/Secretary: Mr. Kachero, F.W., BEd, MBA, (Nairobi), MIHRMS(K) Mr. Japhet L. Wekesa, BCom, MBA, (Nairob), CPA(K)

The College of Architecture and

Engineering is one of the six colleges of the University of Nairobi. The administrative offices of the College, which include the Principal's Office, the Office of the College Registrar/ Secretary and the College Bursar are located on the 2nd floor of the Administration Block, Main Campus.

The College comprises three schools and one institute:

- i) School of The Arts and Design,
- iii) The School of Engineering
- il) The School of The Built Environment,
- iv) The Institute of Nuclear Science and Technology.

There are also two Consultancy Units; the Industrial Research and Consultancy Unit in the School of Engineering and a Projects Office in the School of The Built Environment.



SCHOOL OF THE ARTS AND DESIGN

Director of The School: Dr. L.A. Osanjo, BA Design, (Nairobi), MSc, (JKUAT), PhD, (Nairobi)

A HISTORICAL BACKGROUND OF SCHOOL OF THE ARTS AND DESIGN

1.0 INTRODUCTION

The School of the Arts and Design has two undergraduate degree programmes namely Bachelor of Interior Design and Bachelor of Arts in Design. The 4-year Bachelor of Interior Design was developed in response to customer requests for a specialized degree that compliments the fast growing building industry in Kenya and the region. Through rigorous training, exposure and internship, the Bachelor of Interior degree graduates will fill a gap by ensuring interior spaces meet consumers' health, environmental and aesthetic needs.

In the 4-year Bachelor of Arts Degree in Design, the first two years are foundation years, while the last two years are specialization years: students select one area of specialization among Graphics, Product, Illustration, Interior and Fashion and Textiles. In the final year, students undertake an individual project that culminates in the annual exhibition. The exhibition has proven to be both informative and a marketing opportunity. Prospective students get to understand the expanse of knowledge in the various specializations; on the other hand, prospective employers come to the exhibition to identify the best employees.

Overall, the Design curricula develop graduates who are creative problem solvers and who have broad understanding of design research, theories and practices. The School maintains qualified staffs who are respected industry leaders. They ensure graduates are able to design innovative products, plans, systems and services with a sound understanding of the environment.

REVISED REGULATIONS AND SYLLABUS FOR THE DEGREE OF BACHELOR OF ARTS IN DESIGN

1.0 INTRODUCTION

1.1 Background

The School of The Arts and Design (StAD) is part of the wider University of Nairobi family that provides quality training, research and community service. StAD has a unique programme offer that is attractive to the youth seeking to create employment through application of creative skills. The rapidly expanding field of art and design

responds to societal challenges by imparting skills and opening opportunities for self-employment. The school's unique expertise in interior design lends itself to the development of unique, aesthetic and pleasing furniture and interior spaces both public and private. There is high demand in this area as has been witnessed by fast growth in the building sector in Kenya.

Several factors inform the review of the Bachelor of Arts in Design syllabus including an increase in demand; growth in opportunities in the creative arts industry; more support from the Government of Kenya; increased competition from other universities both local and international that are offering design degrees; increase in available manpower to guide the programme. Graduates from the specializations offered have gone on to engage in self-employment. Those who join the public sector are employed by the government, parastatals, media/broadcasting and publishing, others are teachers in secondary schools. In private sector, our graduates join advertising firms, publishing and media houses, corporate companies such as Bata Shoes and architectural firms.

Graduates from the Bachelor of Arts in Design programme, will be able to apply appropriate design principles including universal and inclusive design (WHO 2011) that seeks to mainstream systems, products, services and interiors for disabled persons in their professional practice. They will be able to develop sustainable solutions that fulfil structural, functional, environmental, aesthetic and psychological needs.

The programme has a mix of delivery strategies that includes lectures, professional interactions, technology supported learning and case studies. The students will be provided with opportunities to compete with their peers both locally and internationally. The School is continually expanding its local and international network in order to remain competitive. Through associations such as the Network of Africa Designers and Design Kenya Society students are provided with internships and mentorship.

2.0 ENTRY REQUIREMENTS

3.1 Minimum Admission Requirements

Admission to Bachelor of Arts in Design degree programme will be based on any one of the following minimum qualifications:

- a) KCSE mean grade C+ or equivalent and an overall mean grade of C+ in each of the 3 clusters below:
 - Mathematics /Business Studies
 - English/Swahili
 - Any cluster III (Art and Design, Home-science, Woodwork, Metalwork, Building and Construction, Drawing and Design, Agriculture) or
 - Any cluster IV (History and Government, Geography, C.R.E., Social Education and Ethics, Music, and French).
- b) KCSE mean grade C- or equivalent plus a Certificate and Diploma in a relevant discipline.
- c) O Level Division III or equivalent plus a Certificate and Diploma in a relevant discipline
- d) Diploma from University of Nairobi or other recognized institutions and an aggregate of C in KCSE or equivalent.
- e) A Level with two principal passes, IB or equivalent in relevant subjects.
- f) Degree from a recognized University.

Applications shall be submitted to the Admissions office through the University of Nairobi online application portal: http://applications.uonbi.ac.ke

3.0 COURSES OFFERED FOR THE PROGRAMME

3.1 List of Courses/Units

FIRST YEAR

Code Unit Name

First Semester

- CCS 001 Communication Skills
- BDS 101 History of Art and Design I
- BDS 103 Design Theory
- BDS 105 Materials and Processes I
- BDS 107 Freehand Drawing I
- BDS 109 Instrumental Drawing I
- BDS 111 Two Dimensional Studies I
- *BDS 113 Colour Theory & Practice

Second Semester

- CCS 010 HIV/AIDS
- CCS 002 Fundamentals of Development and their Application in Kenya
- BDS 102 African Art and Design I
- BDS 104 Computer Studies
- BDS 106 Freehand Drawing II
- BDS 108 Print Techniques I
- BDS 110 Three Dimensional Studies I

SECOND YEAR

First Semester

- BDS 201 Social and Cultural Studies I
- BDS 203 Elements of Economics
- BDS 205 Basic Statistics
- BDS 207 Materials & Processes II
- BDS 209 Advanced Freehand Drawing
- BDS 211 Photography
- BDS 213 Advanced Two Dimensional Studies
- BDS 215 Instrumental Drawing II

Second SemesterBDS 200History of Art and Design IIBDS 202ErgonomicsBDS 204Form & Content AppreciationBDS 206StructuresBDS 208Computer Aided Design	Second Semester (Graphic Design Option) BDS 308 Corporate Identity BDS 310 Packaging Second Semester (Illustration Option) *BDS 312 Digital Illustration
BDS 210 Typography BDS 212 Advanced Three Dimensional Studies	BDS 314 Painting Second Semester (Product Design Option)
THIRD YEAR First Semester (Compulsory theory courses)	BDS 316 Sculpture BDS 318 Pottery and Ceramics
BDS 301Advanced African Art and DesignBDS 303Advanced Communication*BDS 305Entrepreneurship*BDS 307Technology and Innovation	Second Semester (Fashion and Textile Design Option) BDS 320 Pattern Drafting BDS 322 Garment Construction Second Computer (Interview Design Option)
First Semester (Graphic Design Option) BDS 309 Advertising BDS 311 Advanced Photography	BDS 324 Landscaping BDS 326 Exhibition and Display *BDS 328 Industrial Attachment
First Semester (Illustration Option)	FOURTH YEAR
BDS 311 Advanced Photography *BDS 313 Visual Rendering	First Semester (Compulsory theory courses) *BDS 401 Design Practice
First Semester (Product Design Option) BDS 315 Jewellery Design	*BDS 403 Design Project Management BDS 405 Design Project Paper
BDS 317 Leather Products	FINAL YEAR PROJECT
First Semester (Fashion and Textile Design Option) *BDS 319 Fashion Design and Development BDS 321 Printing and Weaving	The final year project starts with BDS 405, in the Second Semester studen work with supervisors on realization of their projects (areas of specializ Graphic design, illustration, fashion and textiles, interior design, ind design). They will be expected to make presentations during seminar critiques. BDS 400 Design Seminar I BDS 402 Design Seminar II
First Semester (Interior Design Option) BDS 323 Furniture BDS 325 Interior Architecture	
Second Semester (Compulsory theory courses)BDS 300Design ManagementBDS 302Social and Cultural Studies IIBDS 304Design MarketingBDS 306Design Research Methodology	BDS 404 Portfolio I BDS 406 Portfolio II

BACHELOR OF INTERIOR DESIGN DEGREE IN INTERIOR DESIGN

1.0 INTRODUCTION

The Bachelor of Interior Design degree program is a logical progression from the general degree programme, B.A. (Design) degree. The motivation for the new programme arose from among others;

- i) The need for a more holistic curriculum that considers and integrates new technological and digital developments for interior design and create employment opportunities in line with industrialization goals.
- The need to respond to market demands and address social, cultural, economic and political changes that affect employment patterns and job definition for design graduates.

2.0 ENTRY REQUIREMENTS

Admission to Bachelor's in Interior Design degree programme will be based on the following minimum qualifications:

- KCSE mean grade C+ or equivalent and an overall mean grade of C+ in each of the 3 clusters below:
 - a) Mathematics
 - **b)** English/Swahili
 - c) Any cluster III (Art & Design, Home-science, Woodwork, Metalwork, Building and Construction, Drawing and Design, Agriculture; or
- ii) Any cluster IV (History & Govt., Geography, C.R.E., Social Education & Ethics, Music, and French.
- iii) KCSE mean grade C- or equivalent plus a Certificate and Diploma in a relevant discipline from a recognized institution.
- iv) O Level Division III or equivalent plus a Certificate and Diploma in a relevant discipline from a recognized institution
- v) KCSE mean grade C and a Diploma from University of Nairobi or other recognized institutions.
- vi) A Level with two principal passes, IB or equivalent in relevant subjects.
- vii) Degree from a recognized University.

REGULATIONS AND CURRICULUM FOR THE FOUR-YEAR COURSE IN BACHELOR OF ARTS IN DESIGN

1.0 INTRODUCTION

Design is an accelerating factor which plays an important role side by side with productivity and management.

The aims and objectives of the four year Bachelor of Arts degree course in design are based on professional education for national development. Design education entails making the students aware of the economic, commercial, industrial and technological factors on design activities. Among others, professional design education include:-

- i) Promotion of interdisciplinary integration of artistic, scientific, socio-political, environmental and technological knowledge.
- ii) Creativity in problem-solving processes in areas pertaining to human communication and needs.
- iii) Encouraging and promoting research.
- iv) The awareness of the role and need for team work with production, management and other decision makers.
- v) Attainment of professional standards, skills and draftmanship.
- vi) Taking into account national objectives of education and economic development such as visual communication and literacy, culture, self-technological needs and trends.

The first year of the BA in Design course is general and introductory in nature. The second and third year courses place a greater emphasis on design theory and studio courses. During the fourth year of the course, students are required to major in either two dimensional or three dimensional areas of design.

REGULATIONS AND SYLLABUS FOR THE DEGREE OF MASTER OF ARTS IN DESIGN

1.0 INTRODUCTION

From its inception in 1968 the Department of Design has been offering program leading to the Bachelor of Arts in Design (BA in Design). However, there is increasing demand in Kenya and challenges, which graduates of current BA in Design are unable to address with a sense of professional competence. The shortfall in meeting the challenges are attributable to the gaps which today's higher education programs, at diploma or undergraduate levels, have not been able to address and meet. The gaps can be abridged through the Master of Arts Degree in Design (MA. in Design).

The MA. Design emphasizes research to extend the boundary knowledge, to acquire professional skills and to address unmet needs. It strives to address local, national, regional and international challenges. It also lays emphasis on interdisciplinary collaboration, concerns for the disadvantaged and national development goals.

2.0 COURSE OBJECTIVES

- i) Enable students to accurately translate cultural, social economic and intellectual concerns into successful concepts and designs;
- ii) Sharpen student's ability to assess design challenges which are experienced locally, nationally.

3.0 ENTRY REQUIREMENTS

Common Regulations, for Masters' degrees, of the University of Nairobi shall apply Admission to the MA. degree in Design is open to holders of Bachelor's degrees in:

- Design, of at least Upper Second Class Honours, of the University of Nairobi or an equivalent qualification recognized by Senate;
- ii) Any discipline related to Design, of at least Upper Second Class Honours from the University of Nairobi or other Universities recognized by the Senate;
- Design or a discipline related to Design of at least Lower Second Class Honours with at least three years of professional experience and a certified portfolio.

DOCTOR OF PHILOSOPHY IN DESIGN

1.0 INTRODUCTION

The programme engages and explores, through research, design theory and practice with the aim of furthering knowledge of design and its applicability to industry and development.

The programme prepares candidates for leadership positions in the field of design as educators, researchers and policy analysts with the primary aim of improving performance in the relevant design domains. The candidates will be expected to participate in seminars and conduct in-depth research in design and related fields.

STAFF LIST

Professor

Syagga, P., BA, MA, PhD, (Nairobi) Nyamai, C., BSc, (Nairobi), MSc, (Helsinki), PhD, (Nairobi)

Senior Lecturer

Osanjo, L.A., BA Design, (Nairobi), MS, (JKUAT), PhD, (Nairobi) Maina, S.M., BA Design, (Nairobi), MA, (KU), PhD, (Nairobi)

Lecturer,

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Mwiti B., BA Design, MA, (Nairobi)
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Part-Time Lecturer

Kamuiru, J., BA, MA, (Nairobi) Aluoch, C., BA, (Fashion Institute, New York), MA, (Marangoni, Italy)

Details on specific admission requirements of the school, credit transfer and exemptions, course structure and duration, examination regulations, course outline and award of degree may be obtained from the School.

Please contact The Director, School of the Arts and Design P.O. Box 30197, 00100 Nairobi Telephone: 2724524, Ext. 238 Email: designdept@uonbi.ac.ke Website: www.uonbi.ac.ke/faculties/faculty_page

SCHOOL OF THE BUILT ENVIRONMENT

Dean of School: Prof. Mary W. Kimani, BSc, Agriculture, MA (Planning), PhD, Land Economics (Nairobi), Reg. Planner, MAAK, MKIP (*w.e.f. 29.11.2019*) Senior Administrative Assistant: Kinyanki, T. M., B.A. (Sociology) (KU), MLITT (St. Andrews, Scotland), PGHD (CHRM) Program. Mgt. Fellow (Nairobi) Reg. (IHRM)

INTRODUCTION

The School of the Built Environment was established on January 3, 2006, following the re-structuring of the former Faculty of Architecture, Design and Development. With 115 staff and over 1,100 students, the School offers a unique range of educational opportunities spanning the diverse range of professions involved in planning, architecture and construction, development and costing, valuation and management of the environment and infrastructure. Its driving philosophy is geared towards the promotion of effective training, education, relevant research and academic excellence in the built environment and related fields.

The School caters for the needs of government, industry, local and international communities and professional practice by providing courses in Architecture and Design Technology, Construction Management, Quantity Surveying, Valuation and property Management, planning, Housing and Urban Management. The courses offered in the School embrace a diversity of subjects, the main common theme running through them being the man-made physical environment and the exercise of human control over it.

There are opportunities within the undergraduate taught programmes for industrial placements, field trips, and practical work, which supplement the usual mix of lectures, assignments and group work. To enrich our programmes, the School maintains close links with the needs of practice through scholarships, research and consultancy. Virtually all courses are fully recognized and accredited by the relevant professional bodies. These include Architectural Association of Kenya, Institute of Planners. In addition, the Bachelor of Architectural Studies/Bachelor of Architecture course is accredited by Commonwealth Association of Architects.

The professions within the School of The Built Environment have got a long history. They are as old as the University of Nairobi itself. In 1967, the former Faculty of Arts and Architecture was re-named the Faculty of Architecture, Design and Development. This change of title reflected a re-appraisal of the objectives and scope of activities undertaken by the Faculty and the corresponding changes in the courses offered as introduced during the 1967-1970 triennium.

The School of The Built Environment offers professional courses in the fields of Architecture, Real Estate, Quantity Surveying, Construction Management, and Planning leading to Bachelor degrees in these fields. There are also, currently six (6) two year postgraduate courses in Urban Management, Planning, Housing Administration, Valuation and Property Management, Construction Management and Architecture. The programmes are also open to self-sponsored students commonly referred to as Module II programmes.

As a professional School with diverse interests and needs, we are committed to being the leading built environment teaching and research institution in Africa. In order to offer relevant, dynamic and market driven academic programmes, all the Departments within the School are currently developing new curriculum in their respective disciplines.

COMMON UNDERGRADUATE EXAMINATION REGULATIONS FOR THE SCHOOL OF THE BUILT ENVIRONMENT

ENTRY REQUIREMENTS

SBE 1. Candidates shall be eligible for the various undergraduate degrees in the School of the Built Environment.

i) KCSE Candidates

The basic admission requirement shall be the minimum requirement set for entry into the Public Universities which is at least an average grade C+. In addition a candidate must have at least a grade of C+ in Mathematics and in the cluster subjects.

ii) "A" Level Candidates

Candidates must have attained two principal passes in Mathematics and anyone of the cluster subjects as in KCSE.

iii) Diploma Candidates

A minimum KCE Division II or KCSE mean grade C and at least C in Mathematics in addition to a pass in the KNEC Diploma in construction industry or any other related field.

iv) Higher Diploma (HD)

Candidates with KNEC Higher Diploma or equivalent in courses.

v) Degree Holders

Holders of university degree from recognized universities in the cluster areas with at least a C+ in Mathematics in KCE or KCSE.

Bachelor of Architectural Studies or equivalent from recognized universities may be considered for admission in the degree of Bachelor of Architecture in the fourth year of study subject to the regulation in regard to Credit Transfer and Exemption in accordance with SBE 2(b).

DEPARTMENT OF ARCHITECTURE AND BUILDING SCIENCE

BACHELOR OF ARCHITECTURAL STUDIES/BACHELOR OF ARCHITECTURE (B.A.S./B.ARCH)

The Bachelor of Architectural Studies/Bachelor of Architecture is a two-tier degree programme that has architectural design as its central discipline. The course structure provides for an intermediate degree, the Bachelor of Architectural Studies (B.A.S.), after four years of study and a professional degree Bachelor of Architecture (B.Arch) after six years.

The course aims to equip the student to comprehend the environmental context of their society, the physical, behavioral, perceptual as well as sensory needs of man, the nature and needs of man's institutions and to evaluate and sensitize these understandings, synthesizing them into design solutions of built forms.

The projects chosen and inputs given are directly related to the Kenyan context.

Architectural Design, which is the core of the course consists of architectural design studio, architectural graphics and communication, basic design, art, photography and computer aided design. In depth studies in Interior Design, Landscape design and Architectural Conservation are available as electives.

The first two years of the course deliver the basic knowledge of architecture through lecturer inputs focused on the core areas of the discipline and an enhanced studio featuring the basic design skills and communication techniques. These years lead to explorations of the design process.

The third and fourth years of the programme focus on the consolidation of this knowledge with more complex design problems and exposure of students to projects of human institutions in rural, peri-urban and urban situations. Students also get a chance to pick an elective stream and study in greater detail the areas of Interior Architecture, Landscape Architecture and Architectural Conservation. Each student is then required to submit a design project at the end of the fourth year.

The fifth and sixth years of the course are focused on preparing the student for a career in architectural practice. After a series of theory units geared to this goal, the student is required to prepare and submit a project paper and design project in area of his choice approved by the Department.

ENTRY REQUIREMENTS

(i) KCSE Candidates

In addition to satisfying the University minimum entrance requirements, a candidate must also have attained a minimum grade of C+ at the KCSE examination in the following subject clusters:

- **1.** English or Kiswahili
- 2. Mathematics
- 3. Physics or Chemistry or Biology or Physical Science or Biological Sciences

- 4. Art and Design
 - or Drawing and Design or Music or Geography or History and Government
- or Building Construction or Economics or Social Education and Ethics or CRE/IRE

ii) ' A' Level Candidate

Candidates must have attained two principal passes in Mathematics and any one of the following subjects:-

- Physics
- Chemistry
- Geography
 Art and Design
- Economics
- Art and Design

and a Credit pass in English Language at KCE or equivalent examination.

iii) Diploma Candidates

Candidates must have attained the KNEC Diploma in Architecture, Building Construction or related fields with a credit pass or equivalent.

iv) Degree Holders

Design

Candidates must have attained a degree from a reorganized university in:-

- Land Economics Building Economics
 - Civil Engineering
- Surveying
 Urban and Regional Planning
- or any other relevant degree
- v) In categories (iii) and (iv), candidates may be required to present portfolios and appear for interviews.

MASTER OF ARCHITECTURE DEGREE (MArch.)

The Department of Architecture offers a two year post graduate Master of Architecture programme. The programme comprises coursework, studio projects, Examination and Thesis.

COURSE OBJECTIVES

The objectives of the course is the advancement of the discipline of architecture in order to create a physical environment that enhances the quality of and harmony of human habitat.

The programme will offer qualified graduates the opportunity to gain further education and experience in design and research in the selected areas of specialization in Architecture. Specialization will be offered in the following areas:

- i) Architectural Designiii) Building Technology
- ii) Environmental Building Scienceiv) Landscape Design
- v) Urban Design

ENTRY REQUIREMENTS

The common Regulations for the Masters' Degrees in all Faculties of the University of Nairobi shall be applicable. The following shall be eligible for registration for the degree of Master of Architecture:- holder of a first degree in Architecture of at least Upper Second Class standing or its equivalent, conferred by the University of Nairobi or any other recognised University.

MASTER OF URBAN MANAGEMENT DEGREE

The course is intended to provide the requisite solid and balanced academic teaching (*including theory and research methods*) and professional and practical training relevant to urban management in Kenya and other countries in East Africa region. Candidates from various educational and occupational backgrounds are eligible for the course, including professionals and paraprofessionals in the urban development process and others with experience in relevant occupations, especially those working in central or local government, voluntary agencies or private firms concerned with planning, provision of services or construction. The course aims primarily at those who wish to pursue a career in urban management in Kenya and other countries.

ENTRY REQUIREMENTS

- A holder of a degree of at least upper second class honours in architecture, building economics, land economics, engineering, commerce, economics, geography, government, law, social work, sociology, urban and/or regional planning or any other relevant discipline from the University of Nairobi or any other institution recognized by Senate as being of comparable academic status;
- A holder of a degree of at least lower second class honors in any of the degree categories specified above with a relevant postgraduate diploma or other equivalent qualifications from the University of Nairobi or any other institution recognized by Senate as being of comparable academic status or with at least 2 years of relevant work experience;

iii) A holder of a degree in categories specified in above with a credit pass in a relevant postgraduate diploma or other equivalent qualifications from the University of Nairobi or any other institution recognized by Senate as being of comparable academic status or with at least 4 years of relevant work experience.

STAFF LIST

Chairman of Department:

Kimeu, M., BArch, (Nairobi), MPhil, (Cambridge), MAAK (A), MAAK (EDC)

Professor:

Magutu, G.J., B.Arch, (Nairobi), MArch, PhD, (California)

Associate Professor

Anyamba, T.J.C., B.Arch, (Nairobi), MArch, (Helsinki), PhD, (Oslo), MAAK(A) Rukwaro, R.W., BArch, MA, PhD, (Nairobi), MAAK (A) K'Akumu, O.A., BA, (Land Econ), MA, (Planning), (Nairobi), PhD, (Westminister), MISK, RV

Senior Lecturer:

Karogi, J.K., BArch, MArch, (Nairobi), MAAK (A) Shihembetsa, L.U., BArch, MA (Planning), (Nairobi), PhD, (New Castle Upon Tyne), MAAK (A)

Lecturer:

Agwanda, T.M.O., BA, (Land Econ), MA, (H.A.), (Nairobi), MSc, MEng, (Cologne), PhD, (SA) Ebrahim, Y.H., B.Arch, (Nairobi), MPhil, (Cambridge), MAAK (A), MAAK (EDC) Kamenju, J.W., BArch, (Nairobi), MArch, (Polytech. of Turin), PhD, (Oslo)
Kamweru, G.K., B.Arch, (Nairobi), MArch, (Auckland)
Kasuku, S.O., BA. (Sociology), (KU), MA, (Planning), Nairobi (*on leave of absence*)
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Miano, K., BEd, (Nairobi), MA, (KU)
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Oyugi, M.O., BA, (Nairobi), MA, (Planning), (Nairobi)
Thatthi, P.S., BArch, (Mairobi), MAAK (A)

Assistant Lecturer:

Ngummo, R.M.K., BA., B.L.Arch. (Guelph), FAAK(LA), (on leave of absence)

Tutorial Fellow:

Kiamba, L.N., BArch, (Nairobi), MPhil, (Cambridge) (*on study leave*) Gichuyia, L.N., BArch, (Nairobi), MPhil, (Cambridge) (*on study leave*) Njoroge, M.M., BArch, MArch, (Nairobi), MAAK(A)

Chief Technologist:

Yasir, B.K., B.Arch, (Nairobi), MBA, (USIU), MAAK(A)

Documentalist:

Vacant

DEPARTMENT OF REAL ESTATE AND CONSTRUCTION MANAGEMENT

REGULATIONS AND SYLLABUS FOR THE DIPLOMA IN ESTATE AGENCY AND PROPERTY MANAGEMENT

1.0 INTRODUCTION

There is an increasing demand for skills and expertise in property valuation, property development, land administration, and property management and estate agency. This demand has been evidenced by the ever increasing rate of urbanisation and development of different types of properties in Kenya but in the East and Central African region. The Department of Real Estate and Construction Management.

University of Nairobi is sensitive to this industry's demand and has designed a series of training programmes in the property sector at various levels. One such training is the Diploma programme in Estate Agency and Property Management that seeks to sensitise students to the importance of property management in the region. The course is designed to meet the increasing demand for a higher degree of accountability and expertise in persons engaged in practice of selling, letting and the management of real estate in Kenya.

2.0 OBJECTIVES

- To equip candidates in real estate agency and property management with the technical skills, knowledge and values appropriate to their current practice or preferred career-paths.
- ii) To enable a wide cross-section of individuals to pursue diploma training while pursuing their careers.
- iii) To contribute to the development of a broad range of demand-driven skills, incorporating new thinking and practice; and thereby give successful trainees strategic advantage in an increasingly sophisticated network of national and regional institutions and economies in the property industry.
- iv) To provide an alternative avenue to the B.A. in Land Economics degree at the University of Nairobi.

3.0 ENTRY REQUIREMENTS

Applicants must satisfy the minimum entry requirements for the admission into the University of Nairobi diploma programmes. In addition, the applicants must possess the following qualifications.

- i) KCSE certificate with a minimum aggregate of C or equivalent with minimum passes at C in Mathematics and English.
- ii) KCE certificate with a minimum grade of Division II and credits in Maths and English or Division III plus a certificate or an equivalent professional training.
- iii) KACE qualification with a minimum of 1 principal pass, or equivalent.
- iv) A holder of a Diploma or an equivalent qualification from an institution recognised by Senate
- v) Holder of a degree from the University of Nairobi or from any other Institution recognised by Senate.

REGULATIONS AND CURRICULUM FOR FOUR-YEAR DEGREE PROGRAMME IN BACHELOR OF QUANTITY SURVEYING

1.0 COURSE OBJECTIVES

The objective of this degree programme is to provide students with sound theoretical knowledge and practical skills to enable them think analytically and conceptually in finding solutions to problems in building and civil engineering construction. The programme is developed around a combination of subject groups such as:

- Construction Technology;
- iv) Construction Management; and
- ii) Construction Economics;
- v) Construction Measurement.
- iii) Construction Law:

The programme aims at equipping the students with specialized skills and techniques which enable them to interact with other professionals in the construction industry; to provide independent, objective, accurate and reliable capital/operating cost assessments for investment funding and project administration and control; to analyze investments and developments for the guidance of owners, financiers and contractors.

The course will produce graduates who help to improve the efficiency of the building construction process. It prepares students for careers in the construction industry in the areas of building and engineering construction cost modelling, construction cost consultancy and quantity surveying, project management, and dispute resolution, among others. Graduates will get employment in government ministries, consulting quantity surveying firms, construction companies, local authorities, parastatals, financial institutions, insurance companies, and other players in the construction industry as well as in self-employment.

2.0 ENTRY REQUIREMENTS

Applicants must meet the stipulated minimum University of Nairobi General Admission criteria as provided for under statute XIX. Applicants with the following qualifications will be eligible for consideration for admission into the degree programme:

- a) KCSE Applicants or Equivalent: Mean Grade C+ with a minimum of grade C+ in the following subject clusters: English or Kiswahili; Mathematics; Physics; Geography or Accounts or Business Studies or Economics, or Building Construction or Drawing and Design.
- b) KACE (A Level) Applicants or Equivalent: Two Principal Passes with a minimum principal 'D' pass in either Mathematics or Physics and in any one of the following subjects: Economics, Geography, and Chemistry and a credit pass in the English language at KCE level or equivalent
- c) Diploma Holders: A minimum KCE Division II or mean grade C in KCSE in addition to a credit pass or equivalent of the Kenya National Examinations Council (KNEC) Diploma or its equivalent in: Building Construction, Architectural Studies, Civil Engineering and Applied Physical Sciences.
- Degree Holders: A holder of a University degree or its equivalent from a recognised University in the following areas: Architecture, Engineering, Design, Economics, Commerce, Land Economics, Planning or any other relevant equivalent degree.

BACHELOR OF CONSTRUCTION MANAGEMENT

1. INTRODUCTION

1.1 Preamble

The Bachelor of Construction Management is a 4 year full-time degree programme. It is a multi-faceted discipline derived from the four main areas of knowledge namely management, law, economics and technology. Its concept, principles and practice are applied with judgement to develop ways to utilize resources economically in the construction industry. Graduates of this degree programme will acquire knowledge in principles and practices that focus on the management activities and challenge that organizations face when they undertake construction projects.

1.7 ENTRY REQUIREMENTS

Applicants must meet the stipulated minimum University of Nairobi General Admission criteria as provided for under statute XIX. Applicants with the following qualifications will be eligible for consideration for admission into the degree programme:

- a) KCSE Applicants or Equivalent: Mean Grade C+ with a minimum of grade C+ in the following subject clusters: English or Kiswahili; Mathematics; Physics; Geography or Accounts or, Commerce or Business Studies or Economics, or Building Construction or Drawing and Design or Art and Design.
- b) KACE (A Level) Applicants or Equivalent: Two Principal Passes; a minimum principal 'D' pass in either Mathematics or Physics and in any one of the following subjects: Economics, Geography, and Chemistry and a credit pass in the English language at KCE level or equivalent
- c) Diploma Holders: A minimum KCE Division II or mean grade C in KCSE in addition to a credit pass or equivalent of the Kenya National Examinations Council (KNEC) Diploma or its equivalent in: Building Construction, Architectural Studies, Civil Engineering and Applied Physical Sciences.
- d) **Degree Holders:** A holder of a University degree or its equivalent from a recognized University in the following areas: Architecture, Engineering, Design, Economics, Commerce, Quantity Surveying, Building Economics, Land Economics, Planning or any other relevant equivalent degree.

REGULATIONS AND SYLLABUS FOR THE DEGREE OF BACHELOR OF REAL ESTATE (BRE)

1.0 INTRODUCTION

The degree programme in Bachelor of Real Estate (BA. Real Estate) is intended to replace the current degree programme in B.A (Land Economics), which has been offered since 1967 in the then Department of Land Development. It was last revised during the introduction of 8-4-4 system of education in 1992. It is generally accepted, however, that curriculum review should be undertaken within 5 years. The proposed revision refocuses the course on the current state of the real estate profession and strengthens its role in the real estate industry and in the economy as a whole.

The real property discipline today is subjected to extraordinary forces that have redefined its attributes and introduced new expectations in property development, valuation, management and administration.

The curriculum is a response to the changing trends in the real estate industry and allows for a considerable degree of flexibility and integration of several disciplines. It was developed in consultation with various stakeholders in the real estate industry including professional bodies and government organisations. It has re-structured or re-packaged some units in the old programme, embraced new concepts and practices in the industry and introduced new course units. To improve on its utility, the programme has been developed to offer the Bachelor of Real Estate degree with two options namely, valuation and property management, and land and housing administration.

The valuation and property management option equips graduates to acquire skills in real property-related disciplines, including information communication technology for use in computer-aided and mass valuations; investment appraisals and financial analysis of property developments; appreciation of commercial business values within the context of property development and to understand the legal framework within which the property investment, development, valuation and management processes occur.

The land and housing administration option equips students with a comprehensive understanding of concepts and application of both land information systems (LIS) and geographical information systems (GIS); land and housing administration, land policy framework, land and use management and the dynamics and operation of land and housing markets.

2.0 COURSE OBJECTIVES

The main objectives of the course are:

- To provide students with sound theoretical knowledge to enable them think analytically and conceptually in finding solutions to problems in the real estate market.
- To provide students with a comprehensive understanding and knowledge of real estate concepts, practical skills and values in valuation and investment appraisal, real estate business, property management, land and housing administration.
- iii) To equip students with specialized skills and techniques which enable them to provide independent, objective, accurate and reliable investment analysis and assessment, as well as manage built assets and the environment to the benefit of owners, occupiers and the society.
- iv) To produce graduates who will help to improve the efficiency of the property investment market, property valuation and management, land and housing administration.

3.0 ENTRY REQUIREMENTS

Applicants must meet the stipulated minimum University of Nairobi General Admission criteria. In addition, applicants must meet the following qualifications to be eligible for admission into the degree programme:

- a) K.C.S.E. Applicants or Equivalent: Mean Grade C+ with a minimum of grade C+ in the following subject clusters:
 - *Cluster 1:* Mathematics
 - Cluster II: English or Kiswahili
 - Cluster III: Physics or Chemistry or Biology or Accounts or Business Studies or Economics
 - *Cluster IV:* Geography or Agriculture or History or Building Construction or Drawing and Design or Woodwork;
- b) KACE ('A' Level) Applicants or Equivalent: Two Principal Passes in any one of the following subjects: Economics, History, Geography, Commerce, or any other relevant subject, and a credit pass in the English language and Mathematics at KCE level or equivalent.
- c) Diploma Holders: Kenya National Examinations Council (KNEC) Diploma or its equivalent in: Building Construction, Architectural Studies, Land Surveying and Civil Engineering; or Diploma in Estate Agency and Property Management from University of Nairobi or any other institution of higher learning recognized by the University of Nairobi Senate.

 Degree Holders: A holder of a University degree or its equivalent from a recognized University in the following areas: Architecture, Engineering, Design, Economics, Quantity Surveying, Construction Management, Commerce, Building Economics and Planning.

REGULATIONS AND SYLLABUS FOR THE POSTGRADUATE DIPLOMA IN HOUSING ADMINISTRATION

1.0 INTRODUCTION

Rapid urbanization, chronic housing shortage and increasing urban informal settlements are major policy issues facing housing administration in Kenya today. Rising demand for good quality housing, low levels of income and increasing costs of building materials, housing finance and building land have interacted to produce a complex situation for professionals and policy workers in the housing field. There is thus increased demand for higher degree of accountability for those involved in the administration of housing provision both at the national level and in the counties. Consequently, the demand for specialized post-graduate education in housing administration has been expressed by both public and private sector seeking to find professionals to look at the housing problems not merely as the task of providing new housing, but also to ensure efficient management of existing housing stock, its correct utilization, and its due care and maintenance.

In line with the Universal Declaration of Human Rights which recognizes the right to adequate housing as an important component of the right to adequate standard of living The Kenya Constitution 2010 states that 'every person has a right to affordable and adequate housing'. The struggle for housing, as a basic human need increases progressively as the human race advances in numbers and cultural diversity.

The Postgraduate Diploma in Housing Administration has been developed in collaboration with the Ministry of Housing which is the Ministry charged with the responsibility of facilitating affordable and adequate housing for Kenyans. This was in response to demand by professionals employed in the Ministry who have no housing background. The course will also be relevant to the county and local authorities.

2.0 OBJECTIVES

- i) To equip the students with real estate management skills.
- ii) To produce well trained real estate personnel and housing administration managers.
- iii) To expose students to the new and emerging issues in housing administration for sustainable housing industry.
- iv) To build human resource capacity in housing administration and property management to cope with increasing housing demand.

3.0 ENTRY REQUIREMENTS

- 3.1 The common regulations governing Post-graduate Diploma programmes in all Faculties, Institutes and Schools shall apply.
- 3.2 The minimum entry requirements for the Post-graduate Diploma in Housing Administration shall be holders of a first degree of University of Nairobi or its equivalent from a university recognized by the University of Nairobi Senate and certified working experience of at least one year in housing sector.

REGULATIONS AND SYLLABUS FOR THE DEGREE OF MASTER OF ARTS IN HOUSING ADMINISTRATION

1.0 INTRODUCTION

The world is undergoing the largest wave of urban growth in history. It is estimated that in 2008, for the first time in history, more than half of the world's population were living in towns and cities. By 2030 this number will swell to almost 5 billion, with urban growth concentrated in Africa and Asia. A rapidly increasing urban population driven by a transforming economy from largely agriculture-based to manufacturing will continue pushing the housing demand.

Rapid urbanization, chronic housing shortage and increasing urban informal settlements are major policy issues facing housing administration in Kenya today. Rising demand for good quality housing in the rural and urban areas, low levels of income and increasing costs of building materials, housing finance and building land have interacted to produce a complex situation for professionals and policy workers in the housing field. There is thus increased demand for higher degree of accountability for those involved in the administration of housing provision both at the national level and in the counties.

Consequently, the demand for specialized post-graduate education in housing administration has been expressed by both public and private sector seeking to find professionals to look at the housing problems not merely as the task of providing new housing, but also to ensure efficient management of existing housing stock, its correct utilization, and its due care and maintenance.

The curriculum is a revision of an earlier two year Master of Arts degree in Housing Administration that was through course work and Thesis with the written course examinations being held at the end of the first year and a thesis written in the second year. The revised curriculum introduces the option of undertaking the programme through course work and research project.

2.0 COURSE OBJECTIVES

- i) To equip the students with real estate management skills.
- ii) To produce well trained real estate personnel and housing administration managers.
- iii) To expose students to the new and emerging issues in housing administration for sustainable housing industry.
- iv) To build human resource capacity in housing administration and property management to cope with increasing housing demand.

3.0 ENTRY REQUIREMENTS

- 3.1 The Common Regulations for the Master's Degrees in All Faculties of the University of Nairobi shall be applicable except where otherwise stated in these regulations.
- 3.2 The following shall be eligible for admission into the Masters of Arts in Housing Administration degree
 - A holder of a degree of at least Upper Second Class standing from the University of Nairobi, or an equivalent another recognized University, in Land Economics, Real Estate, Land Administration, Quantity Surveying, Building Economics and other related fields.
 - ii) A holder of a first degree of Lower Second Class Honours from the University of Nairobi, or its equivalent from a university recognized by the University of Nairobi Senate in areas specified in (i) above plus two years of work, research or teaching experience in housing administration, estate management, land administration or physical planning.

- iii) A holder of a Pass Degree in areas specified in (i) above plus a Post-graduate Diploma from the University of Nairobi in the relevant area, or its equivalent from a university recognized by the University of Nairobi Senate.
- iv) A holder of a Pass Degree in areas specified in (i) above plus five years experience in the relevant area.

MASTER OF ARTS DEGREE IN BUILDING MANAGEMENT

1.0 COURSE OBJECTIVES

The Master of Arts degree in Building Management is intended for graduates practicing in disciplines that are directly relevant to the activities of the construction industry; and who wish to pursue careers in management of construction projects or the maintenance of the completed projects in both public and private sectors.

2.0 ENTRY REQUIREMENTS

The common Regulations for the Masters' Degrees in all Faculties of the University of Nairobi shall be applicable; except where otherwise stated in these regulations. The following shall be eligible for registration for the degree of Master of Arts in Building Management

A holder of a degree of at least Upper Second Class standing from the University of Nairobi or equivalent degree from other recognized University in either architecture, surveying and photogrammetry, civil engineering, building economics, land economics, estate management and related fields.

REGULATIONS FOR THE MASTER OF ARTS DEGREE IN VALUATION AND PROPERTY MANAGEMENT

1.0 INTRODUCTION

There is an increasing demand for skills and expertise in property valuation, property development appraisals, land administration and property management. To meet this demand the department of land development offers a Master of Arts degree course in Valuation and Property Management. The programme targets real estate professionals such as valuers, property managers, building surveyors and land administrators. The main objective of the course is to develop proficiency in operational skills of candidates so that they can effectively apply them in making financial and economic decisions in all aspects of property valuation, property development and property management. This expertise will be useful to people

directly involved in real estate property management and valuation. It is also valuable for decision makers who must judge real estate investment proposals prepared by others. The course is useful in the promotion of careers for professionals working in government ministries, financial institutions, international organisations, private enterprises, and real estate consulting firms that use these skills intensively. It is the only course in the Eastern and Southern African region offering this unique combination of postgraduate training in valuation and property management

2.0 REGULATIONS

The common Regulations for the Masters Degrees in All Faculties of the University of Nairobi shall be applicable.

3.0 ENTRY REQUIREMENTS

The following shall be eligible for admission into the degree of Master of Arts in Valuation and Property Management:

- A holder of a degree of at least Upper Second Class Honours in Land Economics from the University of Nairobi or any other institution recognised by Senate as being of comparable academic status.
- ii) A holder of a degree of at least Upper Second Class Honours in Architecture, Building Economics, Engineering, Commerce. Economics and Social Sciences, Agriculture, Forestry or any other degree from the University of Nairobi or from any other institution recognised by Senate as being of comparable academic status. In addition candidates shall be required to have at least one year of research, teaching or practical experience in Land Administration, Farm Management, Property Development, Property Management or Valuation.
- iii) A holder of a degree of at least Lower Second Class Honours in any of the degrees specified in (i) and (ii) above with a relevant Postgraduate Diploma or other equivalent qualifications and at least two years of work: experience.

REGULATIONS AND SYLLABUS FOR THE MASTER OF ARTS DEGREE IN CONSTRUCTION MANAGEMENT

1.0 INTRODUCTION

The construction industry is dynamic and generates a myriad of challenges with respect to management of construction projects. These challenges need to be met with elaborate and updated skills in order to enhance the efficiency of the construction industry in terms of providing the national capital stock and other infrastructural facilities which are necessary for the national economic development.

The Master of Arts degree programme in Construction Management is designed to prepare students to meet these challenges. Students will be equipped with skills and knowledge to enable them manage construction projects or construction processes or constructed facilities more efficiently. The programme is suitable for professionals such as Quantity Surveyors, Architects, Engineers, Valuers and Estate Managers, especially those who wish to advance their skills in the discipline of Construction Management. The programme encompasses both theory and practice applied to challenges and practical problems of construction projects and the construction industry in general.

2.0 THE PROGRAMME OBJECTIVES

- a) Expose the students to relevant advanced theories in construction project management,
- Equip the students to with enhanced skills for conceptualization and problem solving techniques that meet the challenges of construction project and industry.

3.0 ENTRY REQUIREMENTS

- 3.1 The common regulations governing the Masters degree in all Faculties of the University of Nairobi shall apply.
- 3.2 Holders of at least an Upper Second Class Honours Degree in Building Economics, Quantity Surveying, Architecture, Engineering, Land Economics from the University of Nairobi or an equivalent qualification from a university recognized by Senate.
- 3.3 Holders of at least a Lower Second Class Honours Degree in any of the disciplines specified in 2.2, with a relevant postgraduate diploma or other equivalent qualifications or at least two years relevant work experience.

DOCTOR OF PHILOSOPHY

1.0 INTRODUCTION

The programme blends development theories with practice on by the building and construction industry by exploring through research work issues in the built environment with the aim of furthering knowledge on changing paradigm and their applicability to the said industries.

The programme aims to prepare students for senior positions in the filed of real estate and construction management both as researchers and policy analysts with

the primary aim of improving performance on the relevant industries. The students will be expected to participate in seminars and conducts in-depth research on areas in the building and construction industries.

2.0 REGULATIONS

The Common Regulations for the Degree of Doctor of Philosophy in all Faculties shall apply to the Doctor of Philosophy degree in the Department of Real Estate and Construction management.

STAFF LIST

Chairman of Department:

Wachira-Towey, I.N., BA (Building Econ), MEng (Project Mgnt, (Concordia), PhD, (Cape Town,) RQS FIQSK, FICPMK, MCIArb, MIOD

Professor:

Syagga, P.M., BA, MA, PhD, Land Econ. (Nairobi), MISK, RV, FBIM Land Econ, (Nairobi)

Associate Professor:

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- Kiamba, C.M., BA Land Econ, (Nairobi), MSc, ULA (Reading) PhD, Land Economics, (Cantab), MBS, CBS
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- K'Akumu, O.A., BA (Land Econ), MA (Planning), Nairobi, PhD, (Westminster), MISK, RV

Senior Lecturer:

- Konyimbih, T.M.M., BA Land Econ., (Nairobi), MBA, (R.E. Mktg) PhD, (Cambridge), MISK, RV, LV
- Mbatha, C.M., BA (Building Econ), (Nairobi), MA, (Nairobi), Dr.-Ing, (Wuppertal), FICPMK
- Mwangi, W.N., BA (Land Econ), (Nairobi), MSc, (London), PhD Land Econ, (Nairobi), FISK, MAAK, REA

Nzioki, N.M., BA (Land Econ), (Nairobi), MA (Reading), MISK, AAK, EIK

- Swazuri, M.A., BA Land Econ, (Nairobi), MA (Housing Admin.), PhD, (Nairobi), (on leave of absence)
- Kimani, M.W., BSc, Agriculture, MA (Planning), PhD, Land Economics (Nairobi), Reg. Planner, MAAK, MKIP.

Wachira-Towey, I.N., BA (Building Econ), MEng (Project Mgmt, (Concordia), PhD, Olivia, S.O.M., BA (Building Econ), MA(Cons, Mgt.), (Nairobi), ROS, CIOSK, CAAK (Cape Town,) RQS FIQSK, FICPMK, Kieti, R.M., B.A (Land Econ.), M.A.(Val & PPty Mgnt), PhD. Land Economics, (Nairobi), MCIArb, MIOD MISK Obala, L., BA (Land Econ), (Nairobi), MSc, (Kumasi), PhD, (Witwatersrand), REA, GKIP, Ntarangui, T.N. BA, Building Economics, (Nairobi), MA, Building Management, AMISK (Nairobi), MAAK(QS), MIQSK Murigu, J.B., BA (Land Econ), MA, Housing Admin, PhD, Land Economics, (Nairobi), **Tutorial Fellow** MISK, P&F Manager Muthama, D., BA (Land Econ), MSc, (Antwerp, Belgium), MISK (on study leave) Lecturer: Museleku, E.K., BA (Land Econ), M.A. (Construction Mngt AMISK, PhD (Land Econ, Kariuki, C.W., BA (Land Econ), MA, (Nairobi), MISK, RV, RE (Nairobi), MISK, RV, REA Kithinji, B.N., BA (Building Econ), MA, (Nairobi), LLB, (South Africa), PGD (Law), LLM, Maina, G.N., BA (Building Econ), M.A. (Construction Mgnt), RQS, CIQSK Mwaura, S., M.BSc. Civil Eng., (Nairobi), MSc. Structural Eng., (Nairobi), IMBA, Construction Law & Arbitration, (United Kingdom), Dip. Arbitration (Chartered Institute of Arbitrators), MAAK (QS), CIQSK, LSK, FCIArb, CPM, MICPMK. (Glasgow), R.Eng., MIEK, EIK Oduor, R.O., BA (Building Econ), MA (Bldg. Mgt.), (Nairobi), MAAK, RQS Wamuyu, I.N., BCM, (Nairobi), MA, Construction Mgnt., (Nairobi), ICPMK Oketch, T.O., BA (Building Econ), MA (Constr. Mgt), FIQSK, FAAK, FICPMK, MCI Arb. **Graduate Assistant** ROS Mwendwa, K., BA (Building Econ), IQSK Njue, P.N., BArch, Mphil, (Cambridge), MAAK, RQS. Ochieng, B., BQS (Building Econ), MIQS, RQS Odwallo, J.O., BArch, MArch, (Nairobi), BORAQS (on secondment to Construction and Waweru, E.K, BCM, (Nairobi), M.A. (Construction Mgnt), ACMK Maintenance)

DEPARTMENT OF URBAN AND REGIONAL PLANNING

REGULATIONS AND SYLLABUS FOR THE DEGREE OF BACHELOR ARTS IN PLANNING [BA (PLANNING)]

1.0 INTRODUCTION

The Department of Urban and Regional Planning offers two degree programmes. These are B.A (Planning) and M.A (Planning). These two degree course programmes are recognized for the registration of Physical Planners in Kenya under the Physical Planners Registration Act 1996 and; The Legal Notices No. 23, No. 24 and No. 25 on the Physical Planners (Professional Misconduct (Procedure) Rules 1998.

2.0 COURSE OBJECTIVES

- 1. To improve the quality of the professional planner, to facilitate and guide society in spatial policy, plan formulation, plan preparation and implementation at village, community, neighbourhood, rural/urban district, urban/metropolitan, regional/sub-national, and national levels.
- 2. To increase the number of trained and professionally qualified planners who are able to provide spatial planning services to small establishments such as the smaller urban and rural local authorities and private sector who are financially not able to employment services of Masters level in planning degree holders.
- **3.** To train planning professionals capable of working for the National Government, County Governments, city and municipal boards and town committee jurisdiction; regional development authorities, Non-governmental Organizations (NGOs), or to practice as planners in private consulting firms..
- 4. To buttress the MA. (Planning) and PhD. (Planning) in planning programmes with an undergraduate training component in furtherance of disciplinary (theoretical/philosophical/research) and professional (practice/praxis) growth and development of planning in Kenya, East Africa and the rest of the world.

- 5. To respond to the needs of the Kenya public generally and the Government of Kenya in particular, by enacting a wide range of planning legislation to guide, manage and regulate urban and regional growth and development. Specifically through the proper allocation and use of private and public land as well as other land-based resources, the planner will make key contribution in decision-making.
- 6. To support the implementation of the:
 - a) The Physical Planning Act 1996,
 - **b)** The Physical Planners Registration Act 1996, and;
 - c) The Legal Notice No. 23, No. 24 and No. 25 on the Physical Planners (Professional Misconduct) (Procedure) Rules, 1998, all of which proscribe anyone except registered planners from carrying out planning work in Kenya.
- **7.** To enhance the development of relevant and quality education for professional planning in Kenya, the African continent in general and globally.
- **8.** To enhance institutional financial resource of DURP through increased student numbers, attracting research funds and other types financial endowments.

3.0 ENTRY REQUIREMENTS

- **1.** Candidate must meet the Minimum University general admission criteria of C+.
- 2. In addition candidates must have attained the required minimum grades of C+ at the Kenya Certificate of Secondary Education (KCSE) in

3.1 Subject Clusters:

- 1. Mathematics 3. Any Group III
- 2. Any Group II 4. 2nd Group II/any Group II/any Group IV/any Group V

KCSE Subject Grouping

Group I - English - Kiswahili

- Group II Biology - Physics - Chemistry
- Group III History and Government

- Mathematics

- Group IV Home Science - Art and Design
- Geography
 Christian Religious Education
- Agriculture

- Aviation Technology

- Computer Studies

- Islamic Religious Education
- Hindu Religious Education

- Group V French Arabic - German - Music - Business Studies
- **3.** Applicants with diplomas in panning or specialization in urban planning or regional planning may be admitted into the Bachelor of Arts in Planning parallel degree programme so long as they have proven experience of at least two years work in a relevant government department, local authority, Non-governmental organization, relevant spatial planning agency, private enterprising company or private planning office or firm. In such a case, the admission of the applicant is subject to the approval of the University of Nairobi.

MASTER OF ARTS IN PLANNING

1.0 INTRODUCTION

The Master of Arts in Planning programme aims to train a high calibre of professionally qualified personnel in urban and regional planning. Many African countries have recently adopted policies for decentralized development and governance, which has led to a growing demand for qualified planners. The programme provides planners with the requisite skills and specialized knowledge needed to address numerous challenges associated with rapid urbanization, resource use and rapid population increase in Africa. The Department of Urban and Regional Planning is a leading institution for training professional planners in the entire Eastern and Southern Africa region. The regulations for the degree of Master of Arts in Planning have been revised to provide flexibility for applicants to pursue the course on semester basis.

The programme incorporates theoretical foundations of planning and a strong practical and professional training, along with basic multi-disciplinary knowledge in planning areas, methods of research and analysis and computer application skills. The course is intended for graduates and professionals with relevant educational background and experience who wish to take up planning roles with public, private, voluntary and international agencies working at local, sub-national, national and international levels.

2.0 COURSE OBJECTIVES

a) Provide requisite skills and knowledge needed to contribute effectively to the formulation, design and implementation of local, sub-national and national planning in its various concerns;

- **b)** Provide in depth knowledge and understanding of the complex interactions between the natural and the built environment and the dynamic nature of urban and regional development;
- c) Develop appreciation and commitment to professional standards and ethics, recognizing the pluralistic nature of development, variety of stakeholders and the planner's multiplicity of roles.

3.0 ENTRY REQUIREMENTS

The common regulations for the Masters degrees for all faculties of the University of Nairobi shall be applicable.

The following shall be eligible for admission into the degree of Master of Arts in Planning:

- i) A holder of a Bachelor's degree, of at least Upper Second Class Honours in Planning, Architecture, Land Economics, Building Economics, Civil Engineering, Design, Surveying, Agriculture, Law, Economics, Geography, Sociology, Government, Anthropology, Social Work or any other relevant discipline from the University of Nairobi or any other institution recognized by the University of Nairobi Senate as being of comparable academic status;
- A holder of a Bachelor's degree, of Lower Second Class Honours in any of the degree categories specified in (i) above with a relevant Postgraduate Diploma or other equivalent qualification from the University of Nairobi or any other institution recognized by the University of Nairobi Senate as being of comparable academic status;
- iii) A holder of a Bachelor's degree, of Lower Second Class Honours in any of the degree categories specified in (i) above with at least 2 years of relevant planning/development work experience.

DOCTOR OF PHILOSOPHY IN PLANNING

1.0 INTRODUCTION

The Doctor of Philosophy programme in the Department of Urban and Regional Planning offers opportunity for advanced academic and scholarly work in the field of planning encompassing both urban and regional planning The programme blends norm of development theories with planning theory and practice by exploring through research work, the central theoretical and methodological issues in development studies and, the various streams of planning theory. The aim is furtherance of knowledge on changing development and planning paradigms and their applicability to understanding the processes of development and practices of planning for them.

The programme aims to prepare students for senior positions in the field of development studies both as researchers and policy analysts with the primary aim of making the development process meaningful, interactive and sustainable. The students will be expected to participate in seminars and conducts in-depth research on a development topic falling within the research priorities of the Department.

2.0 REGULATIONS

The Common Regulations for the Degree of Doctor of Philosophy in all Faculties shall apply to the Doctor of Philosophy in Planning.

3.0 ELIGIBILITY FOR REGISTRATION

The following shall be eligible to apply for registration for the degree of Doctor of Philosophy in Planning:

- 1. A holder of Master's degree in Development Studies or any other social science discipline for the University of Nairobi;
- A holder of a Master's degree in any other discipline from the University of Nairobi, who provides evidence of social science base study, research or publications;
- **3.** A holder of a Master's degree or equivalent academic qualifications from other institutions recognized by the University of Nairobi Senate as of comparable status.

4.0 **PROGRAMME STRUCTURE**

The PhD Programme in Planning at the University of Nairobi shall be conducted by research and thesis.

5.0 DURATION AND FORM OF REGISTRATION

A candidate registered for the degree of Doctor of Philosophy in Planning shall carry out a programme of original research over a minimum period of 18 months after the date of registration or after completion of any required coursework and/or examination.

No candidate for the degree of Doctor of Philosophy in Planning shall be registered as a full-time student for more than four years or as a part-time student for more than five years, except by permission of Senate.

Subject to the approval of Senate, Department of Urban and Regional Planning may require candidates to attend such a course or courses as may be considered appropriate to remedy deficiencies in the candidate's academic background or to endow the candidate with specialized skills or knowledge to assist in the proposed study or research. Performance in courses offered may be assessed.

STAFF LIST

Chairman of Department:

Mwangi, K., BSc (Hons), MA (Planning), (Nairobi), PhD (Planning), (Waterloo), MEIK, MKIP, FKIP Certified Planner Lead EIA Expert

Professor:

Obudho, R.A., AASc, (Sunny-Cobleskill), BSc, (Sunny-Albany); BSc (Albany), MSc, PhD, (Rutgers), PGDE (E. Africa).

Associate Professor:

Akatch, S.O., BA (Land Econ), (Nairobi), MA, (Planning) (Nottingham), MRTPI, Dr.Reg. Plan., (Dortmund), MRTPI MAAK (T.P.), Regd Planner

Ndegwa, E.N., BA (E. Africa), Dip (Urban & Regional Planning), MA, (Planning), (Nairobi), PhD, (Nottingham), MKIP, Regd Planner

Ngau, P.M., BEd, (KU), MA, (Nairobi), PhD, (UCLA), MKIP, Regd Planner

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Mwangi, K., BSc (Hons), MA (Planning), (Nairobi), PhD (Planning), (Waterloo), MEIK, MKIP, FKIP, Certified Planner, Lead EIA Expert

Senior Lecturer:

Obiero, S.V., BA, (Bldg Econ), MA (Planning), (Nairobi), PhD, (Wales) Mugo, F.W., BSc, MA, (Nairobi), MSc, PhD, (Cornell), Lead EIA Expert Ayonga, J.N., BA, MA, (Planning), PhD (Planning),(Nairobi)

Lecturer

Mairura, E.O., BSc (Eng), MA, (Planning), (Nairobi), MAAK (TP), Certified Planner Nzainga, H.K., BEd, MA (Planning), (Nairobi), Dip Housing, (HSRotterdam), MAAK (TP), MKIP, Certified Planner, Lead EIA Expert Abonyo, D.A., BArch, (Nairobi), MArch, (Leuven), MAAK (A) (On leave) Karisa, D.C., BArch, MA (Planning), (Nairobi), MAAK (A), MKIP, Certified Planner (On leave) Mwaura, A.M., BArch, MA (Planning), (Nairobi), PhD, (Oxford Brookes), MAAK (TP) Mbathi, M., BA, MA (Planning), (Nairobi), MSc, (Geo-Info), (ITC, Netherlands), MKIP, **Regd Planner** Nga'yu, M.M., BA, MA, (Planning), PhD (Planning) (Nairobi), MKIP, Certified Planner, Lead EIA Expert Musyoka, R.M., BA, MA (Philosophy), MA (Planning), (Nairobi), PGD, (Erasmus), PhD, (Birmingham) MKIP (On leave) Opiyo, R.O., BA, (CUEA), MA (Planning), PhD (Planning) (Nairobi) Muketha, S.M. BSc. (Survey & Photogrammetry), M.A. (Planning), PhD (Planning), MISK, MKIP, Licensed Surveyor, Regd Planner, Lead EIA Expert Murimi, J.M., BSc (Eng) (Nairobi), MSc (Geotech & Infrastructre), (Hanover), MSc (Urban & Reg. Planning), (Dortmund) Osengo, C., BA (Hons), MA (Planning), MKIP, Regd. Planner **Graduate Assistant:**

Wamuchiru, E.K., BA (Planning), MA (Planning), (Nairobi), Dr. Reg.Plan, (Darmstadt) Olale, P.O., BA, (Planning), M.A. Env. Law, (Nairobi)

Details on specific admission requirements of the School, credit transfer and exemptions, course structure and duration, examination regulations, course outline and award of degree may be obtained from the School.

Please Contact: The Dean School of the Built Environment Email: built-environment.uonbi.ac.ke

SCHOOL OF ENGINEERING

Dean of School: Prof. Gitau, A.N., BSc, (Egerton), MSc, PhD, (Nairobi), REng.MIEK, MKENDAT, MKSAE Senior Administrative Assistant: Midamba, F.A., Dip. HRM, (Nairobi)

REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN THE SCHOOL OF ENGINEERING

1.0 ENTRY REQUIREMENTS

F1. Candidates shall be eligible for admission into the Bachelor of Science degree in the School of Engineering in the following categories:

a) **KCSE Candidates**

The basic admission requirement shall be the minimum requirement set for entry into the Public Universities which is a mean grade of at least C+ in the Kenya Certificate of Secondary Examinations (KCSE). In addition, candidates shall have obtained a least C+ in each of the four clusters of subjects from any of the following alternative clusters. However, a cut-off grade higher than C+ in each cluster subject shall be preferred if limitation of the number of places available for each degree programme versus the number of qualified candidates so demand. The said cut-off grades shall be determined and implemented by the School Board.

Alternative A:

Physics Biology or Geography or any Group IV Subject Chemistry Mathematics

Alternative B:

Physical Sciences Geography or any Group IV Subject **Biological Sciences** Mathematics

Group IV Subjects:

Home Science	Building Construction
Art and Design	Power Mechanics
Agriculture	Electricity
Woodwork	Drawing and Design
Metalwork	Aviation Technology

b) A-level Candidates

Candidates with a minimum entry requirement of principal C passes in Mathematics and Physics and a subsidiary level pass in Chemistry with a credit pass in English at 'O' level, except that for Geospacial Engineering, a subsidiary level pass in Geography shall also be accepted in lieu of Chemistry.

KNEC Higher National Diploma (HND) or Equivalent C)

Candidates with Higher National Diploma in the following broad areas of study:

- i) Agricultural Engineering
- iv) Mechanical Engineering
- ii) Civil Engineering iii) Electrical Engineering
- v) Geospatial Engineering
- vi) Any other approved subject area.

Ordinary KNEC Diploma or Equivalent (with credit pass) d)

- i) Agricultural Engineering ii) Civil Engineering
- iv) Mechanical Engineering v) Geospatial Engineering
- vi) Any other approved subject area.
- iii) Electrical Engineering

Diploma from Science/Technical Teacher Training Colleges e)

Candidates with a diploma mathematics and physics from recognized teacher training college.

f) BSc/BEd (Science) degrees from Universities or any other relevant degrees.

Candidates with a Bachelor of Science or Education degree in Physics and Mathematics from recognized institutions or any other relevant degree from a recognised institution.

DEPARTMENT OF ENVIRONMENTAL AND BIOSYSTEMS ENGINEERING

INTRODUCTION

Biosystems Engineers are expected to provide efficient engineering solutions to technical problems involving living things and the natural environment. Students receive a broad exposure to engineering through courses such as mechanics, materials, thermodynamics, electronics and circuits, transport processes, unit operations, instrumentation and design.

They study "life" sciences and ways biological systems interact with the environment. This diverse background makes them capable of understanding the engineering aspects of projects and enables them to operate well through a multidisciplinary approach. The programme includes biosystems and other biology-based production systems, the environment, food and processing systems in agro-industries, energy, machinery systems and structures.

Our Bsc. Programme is structured to be completed in five years. The first and second year are dedicated to learning applied and engineering sciences. Third year covers the theory of Biosystems Engineering. The fourth year introduces the student to the applications of Biosystems Engineering. The fifth year gives the students an opportunity to specialize in one branch of Biosystems Engineering.

REGULATIONS AND SYLLABUS FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOSYSTEMS ENGINEERING.

The curriculum in the Department of Environmental and Biosystems Engineering was revised recently so as to take into account recent scientific and technological advances in the education and training of engineers.

The current option of admitting students to the department produces a broad based and versatile graduate who can adapt to rapid technological changes. The department offers a Bachelor of Science (BSc.) in Biosystems Engineering degree programme with options in the following areas:

• Environmental Engineering

The application of the science and art of engineering to the design and management of natural resources of air, soil and water in order to minimize the adverse impact of human activities and other processes on the natural environment. It involves waste water management and air pollution control, recycling of wastes, water systems engineering, hygiene and sanitation, environmental impact assessment of development projects.

Irrigation and Water Resources Engineering

The application of the science and art of engineering to the planning, design and management of systems for control and utilization of water resources for industrial, amenity, domestic and livestock consumption, irrigation and the drainage of excess water from fields.

Power and Machinery Engineering

The design and management of energy systems, machinery and implements for production and processing in agriculture, forestry, amenity, aquaculture and related biology based production and processing systems.

Process and Food Engineering

The application of the science and art of engineering to the mechanical, chemical, thermal and other physical processes involved in the primary and secondary processing of food, fibre and other raw materials from agriculture and forestry and land.

• Structures Engineering

The planning, design and management of buildings and other structures for human habitation, production, storage and processing of biology based products from agriculture, forestry, food and other bioprocess industries and water and the environment in general.

The revised BSc. (Eng.) programme will produce graduates who are able to pursue careers in industry, research and education.

Their education will include in depth scientific exposition of engineering principles and concepts and will focus on the 'science of engineering'. The graduates will also be exposed to relevant practical work so that they may become hands-on engineers.

BACHELOR OF SCIENCE IN BIOSYSTEMS ENGINEERING

This programme will lead to award of the degree of Bachelor of Science in Biosystems Engineering.

REGULATIONS AND SYLLABUS FOR THE DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL AND BIOSYSTEMS ENGINEERING

1.0 INTRODUCTION

The syllabus takes into account recent scientific and technical advances in the education and training of engineers. It is relevant and broad based in line with the requirements of the engineering profession. To improve on its utility, the programme has been and will continue to be re-aligned to be consistent with the changing needs of the society. It has been developed from a programme of five options to the current five distinct areas of study: Environmental Engineering, Irrigation and Water Resource Engineering, Power and Machinery Engineering, Process and Food Engineering and Structures Engineering, each one addressing a unique engineering need in the society. The programme is targeted towards those graduates who would like to practice at a higher level in industry, research and education.

The broad objective of the programme is to give additional knowledge and necessary skills to the engineering graduates to enable them practice at a higher level in industry, research and education.

2.0 ENTRY REQUIREMENTS

- **2.1** The common regulations for Masters Degree in all Faculties and those of the School of Engineering, of the University of Nairobi, shall apply.
- **2.2** The following shall be eligible for admission:
 - **2.2.1** Holders of Bachelor of Science in Engineering with at least upper second-class honours Degree.
 - **2.2.2** Holders of lower second-class honours Degree in Engineering with either a relevant post-graduate diploma or at least two years relevant experience.
 - **2.2.3** Holders of pass Degree in Engineering with either a relevant post-graduate diploma or three years relevant experience.

DOCTOR OF PHILOSOPHY DEGREE IN THE DEPARTMENT OF ENVIRONMENTAL AND BIOSYSTEMS ENGINEERING

INTRODUCTION

This programme will be a follow-up of the respective master's programmes, except where otherwise provided for. Students will be required to work on areas that have not been worked on before. Originality of research (*procedure or area covered*) is of paramount importance.

ENTRY REQUIREMENTS

The common regulations for the doctor of Philosophy degrees in all faculties/ Schools of the University shall apply.

Admission into the programmes shall be open to holders of Masters of Science degree in the respective field of Engineering specialization, either from the University of Nairobi or from other University recognized by the senate of the University of Nairobi.

Provision is given for upgrading of a Master's programme directly to PhD. level, if the quality of research is high and the senate allows.

STAFF LIST

Chairman of Department

Mbuge, D.O., BSc, (Egerton), MSc, PhD, (Nairobi), MKSAE, MKRA

Associate Professor:

Biamah, E.K., Dip.Agric.Eng., (Egerton), BSc, MSc, (Oklahoma) PhD, (Wageningen), MIEK, MASAE, MWASWE

Gitau, A.N., BSc, (Egerton), MSc, PhD, (Nairobi), REng.MIEK, MKENDAT, MKSAE

Senior Lecturer

Gichuki, F.N., Dip. Agric. Eng., (Egerton), BSc, MSc, PhD, (Utah State), MKSAE
Mbuge, D.O., BSc, (Egerton), MSc, PhD, (Nairobi), MKSAE, MKRA
Muchiri, G., BSc, (Techion), MSc, (Iowa State), PhD, (Nairobi), REng. MKSAE, MIEK
Muthumbi, W., BSc, (Nairobi), MSc, PhD, (Belgium)
Mutua, J.M., BSc, MSc, (Nairobi), REng, MIEK, MKSAE, (*Study Leave*)
Mutuli, D.A., BSc, (Nairobi), MPhil, (Newcastle Upon Tyne), REng, MIEK, MKSAE, MASAE, MIAgrE, MCE, (Britain)
Omuto, C.T., BSc, (Egerton), MSc, PhD, (Nairobi)

Lecturer:

Agullo, J.O., BSc, MSc, (Nairobi) Inima, A.K., BSc, (Nairobi), MSc, (Dar-as-Salaam), MKSAE, MALIN, MIAH, MKMS Obiero, J.P.O., BSc, (Egerton), MSc, PhD, (Nairobi) MKSAE, MKRA, MUONAA Ondieki, S.C, Dip Agric. Eng. Bsc, (Egergon), MSc, (Dar-as-Salaam), MKSAE)

Graduate Assistants:

Kimani, P.K., BSc, MSc, (Nairobi) Ndunge, N.B., BSc, (Nairobi)

Principal Technologist:

Odhiambo, J.O., Dip Agric. Eng. BSc, (Egerton), MSc, (Nairobi), MKSAE, MKRA

Chief Technologist:

Chweya, G.E. Dip., (Kenya Poly), B.Tec & HND, (Oxford), PGD Irrigation Eng. (Israel), PGD Instrumentation, (Japan), MKSAE, MSEASAE, MKENDAT

DEPARTMENT OF CIVIL AND CONSTRUCTION ENGINEERING

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

1.0 INTRODUCTION

The Civil Engineering curriculum is planned to provide a sound professional education. After completing their first-year courses, students are offered courses in applied mechanics, hydraulics, surveying, materials, structures, engineering management, geotechnical engineering, transportation engineering and engineering and environmental health and water resources engineering. Courses in mathematics, computer programming and non-technical subjects are also obligatory in the programme. Throughout their studies, students are encouraged to take part in applied and theoretical research, as well as in practical professional training.

Each semester courses, with the exception of structural design, shall have a total of 45 contact hours including lectures and tutorials and shall comprise one course unit. There shall be a practical assignment term lasting for eight weeks at the end of the third year of study.

The undergraduate students shall complete the following course units.

First year	13	Fourth year	16
Second year	14	Fifth year	14
Third year	15		

In order to cover this syllabus, service courses shall be provided by the following departments:

Mathematics	FCE 161/2, FCE 163/4, FCE 261/2,
	FCE 361/2, FCE 461, FCE 562
Physics:	FCE 131/2
Chemistry:	FCE 181/2
Geology:	FCE 211
Economics:	FCE 271
Surveying:	FCE 251, FCE 351, FCE 552
Institute of Computer Science	FCE 165, FCE 266, FCE 566
	,,

MASTER OF SCIENCE IN CIVIL ENGINEERING

1.0 INTRODUCTION

The course is intended for engineers with suitable qualifications and/or professional experience who wish to study further or expand their range of expertise in specified field of civil engineering.

The options offered are tailored to the requirements of the civil engineering industry. The course contents will enable participants to specialize in any of the five following options. Not all these options will be available un any one year.

2.0 ENTRY REQUIREMENTS

The following shall be eligible for admission into the programme:-

 A holder of a Bachelor of Science Degree with at least Upper Second class Honours in Civil Engineering of the University of Nairobi or a university recognized by senate.

- **ii)** Holders of Lower Second Class Honours degree in Civil Engineering with a relevant postgraduate diploma or two years relevant experience.
- iii) Holders of pass degree with either relevant post graduate diploma or three years relevant experience.
- iv) A holder of a Bachelor of Science Degree of the University of Nairobi in a discipline closely related to the selected MSc. option who has in addition relevant practical experience to be assessed by a departmental panel.
- v) A holder of similar qualifications from other institutions recognized by the Senate as equivalent to a Bachelor of Science degree of the University of Nairobi.

STAFF IST

Chairman of Department:

Dulo, S.O., BSc, (Nairobi), MSc, (Birmingham), PhD, (Nairobi), FHSK, GMIEK

Professor:

Gichaga, F.J., MBS, EBS, BSc, (E. Africa), MSc, PhD, (Nairobi), FIEK, REng, CEng Mbeche, O.O., BEng (Stevens, New Jersey), MSc, (Brooklyn), PhD, (Nairobi) AMASCE Mwea, S.K., BSc, (Nairobi), MSc, (Birmingham), PhD, (Nairobi), MIEK, REng Njoroge, B.N.K., BSc, (Nairobi), MSc, (Newcastle Upon Tyne), PhD, (Duke), MIEK, R. Eng.

Odira, P.M.A, BSc, (Nairobi), MSc, PhD, (Tampere), MIEK, REng

Associate Professor:

Nyangeri, E.N., BSc, (Nairobi), MSc, PhD, (Tampere) MIEK, MASCE, REng

Senior Lecturer:

Abuodha, S.O., BSc, (Nairobi), MSc, PhD, (Manchester), MIEK, REng. Dulo, S.O., BSc, (Nairobi), MSc, (Birmingham), PhD, (Nairobi), FHSK, GMIEK Gitonga, J.N., BSc, MSc, (Nairobi), MIEK, REng Koteng, D.O., BSc, (Nairobi), MSc, (Melbourne), MIEK, R.Eng Maimba, P.P., BSc, (CNAA), MPhil, (Newcastle Upon Tyne), MIEK, REng
Miringu, S.S., BSc, (Nairobi), MSc, (Liverpool), MIEK, REng
Mumenya, S.W., BSc, (Nairobi), MSc.Eng, (City University, London), PhD, (Cape Town), MIEK, REng
Ndiba, P.K., BSc, MSc, (Nairobi), PhD, (New Jersey), REng
Ngari, S.K., BSc, (Nairobi), MSc, (Tampere), MIEK R. Eng,
Oonge, Z.N.I., BSc, (Nairobi), MSc, PhD, (Iowa), MIEK, REng
Wanjau, D.M., BSc, (Nairobi), MSc, (Newcastle Upon Tyne), FIEK, MASCE, REng
Osano, S.N., BSc, (Nairobi), MSc, (Portsmouth), PhD, (Nairobi)
Mwero, J., BSc, MSc, PhD, (Nairobi)

Lecturer:

Goro, E.C., BSc, MSc, (Nairobi), MIEK, REng Kipkoros, K., BSc, MSc, (Delft) Matheri, P.G., BSc, MSc, (Nairobi), MIEK, REng Munga, G.A., BSc, (Nairobi), MSc, (Glasgow) Mutua, S.K., BSc, MSc, (Nairobi) Ruigu, J.R., BSc, (Nairobi), MSc, (Birmingham), MIEK, REng Wokabi, M.G., BSc, PGDE, (Nairobi), MEng (Canterbury) Charania, S., BSc, (Nairobi), MSc, (New South Wales, Australia), R.Eng., MIEK, E.Eng., MICE

Tutorial Fellow:

Mwangi, F.W., BSc, MSc, (Nairobi) Osano, P.M., BSc, (Nairobi), MSc Okoya, B., BSc, MSc, (Nairobi), GIEK, GEng

Principal Technologist:

Kanyugo, J.M.N., Higher Dip Water Eng, BPsych. (Nairobi), AIEK, RGTEng.

Chief Technologist:

Ogalo, J.B., Higher Dip. Highways Eng, RGTEng.

DEPARTMENT OF ELECTRICAL AND INFORMATION ENGINEERING BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONIC ENGINEERING

1.0 INTRODUCTION

Each semester course shall have a total of 45 contact hours including lectures and tutorials and shall comprise one course unit. Laboratories shall have 60 hours per semester and shall comprise one course unit, except in the first year of study when they shall have 45 hours.

There shall be a practical assignment term lasting for eight weeks at the end of the third year of study. There shall also be industrial attachment of undergraduate students during the long vacation of the fourth year of study.

The undergraduate students shall complete the following course units (*including laboratories*):

First year	14
Second year	16
Third year	16
Fourth year	16
Fifth year	14
Total	76

It is assumed that the courses "Elements of Philosophy, Development Process" and "Communication Skills" shall be designed and taught by the Board of Common Undergraduate studies.

In order to cover this syllabus, service courses shall be provided by the following Departments.

Civil Engineering	FEE 252
Mechanical Engineering	FEE 241/2, FEE 251, FEE 261/2, FEE 361
Mathematics	FEE 111/2, FEE 121/2, FEE 271/2, FEE 471/2, FEE 571
Physics	FEE 101/2

In interpreting the course codes, after FEE the first integer denotes the year of study. The second integer denotes as far as is possible, the subject area while the last integer denotes the semester in which the course is taught; 1 for the first and 12

for the second semester. Where the last integer is 0 it means that this is a course which is done throughout the two semesters such as the Engineering Project in the fifth year of study

MASTER OF SCIENCE IN ELECTRICAL AND ELECTRONIC ENGINEERING

1.0 INTRODUCTION

The course offers opportunities to candidates with suitable qualifications who want to pursue further studies in electrical and electronic engineering. The course has taken into account the latest developments in this field of engineering and the national requirements. The course is offered in two fields; Electrical and Electronic Engineering. Options in these two fields have been carefully grouped into clusters, which define areas of further specialisation.

2.0 ENTRY REQUIREMENTS

The following shall be eligible for admission into the programme:

- **2.1.** A holder of at least a second class upper division degree of Bachelor of Science in Electrical Engineering of the University of Nairobi.
- **2.2.** A holder of a qualification in Electrical Engineering or Electronic Engineering, awarded by an institution recognised by the Senate of the University of Nairobi as equivalent to the above qualification of the University of Nairobi.
- **2.3.** The common regulations for the Masters degree in all faculties shall be applicable.

STAFF LIST

Chairman of Department

Kamucha, G.N., BTech, (Moi), MSc, (Aberdeen), Dr.-Ing., (Kassel)

Professor

Mwangi, E., BSc, MSc, PhD

Associate Professors

Mwangi, E.M., BSc Eng, MSc, (Nairobi), PhD, (Loughborough), MIEE, CEng. Mang'oli, M.K.W., BSc Eng, MSc, (Nairobi), PhD, (Pennsylvania), MIEK, REng. Oduol, V.K., B.Eng, MEng, PhD, (McGill), MIEEE Mbuthia, J.M., BSc, (Nairobi), MSc, D.I.C., PhD, (UMIST), REng Nicodemus, A. Odero, BSc, MSc, (Nairobi), PhD, (JKUAT), REng Ouma, H.A., BSc, (Nairobi), MEng, (UTS), PhD, (Kanagawa), SMIEEE

Senior Lecturers

Mwema, W.N., BTech, (Moi), MSc, (Nairobi), Dr.-Ing., (Kassel), MIEEE Kamucha, G.N., BTech, (Moi), MSc, (Aberdeen), Dr.-Ing., (Kassel) Wabuge, C.W., BSc, MSc, (Nairobi), PhD, (Tokushima) Dharmadhikary, V.M., B.E., M.E, (Poona), PhD, (Nairobi), MIEEE

Lecturers

Ombura, C.O., B.E, (Mangalore), ME, (IIT-Delhi) Kyalo, V., BSc, (Nairobi), MEng, (Eindhoven), MIEEE, REng (*on leave*) Ogaba, S.L., BSc, (Makerere), MSc, (Loughborough) Akuon, P.O., BSc, (Nairobi), MSc, PhD, (Kwazulu-Natal)

Tutorial Fellows

Ali, S.A., BSc, (Nairobi), MSc, (Pretoria) Musau, P.M.M., BSc, (Nairobi), MSc, (Nairobi),

Graduate Assistants

Ondeng', O,R., BSc, (Nairobi), MSc, (Nairobi) Otieno, G.O., BSc, (Nairobi) Nyete, A.M., BSc, (Nairobi), MSc, PhD, (Kwazulu-Natal)

Chief Technologist

Oloo, T.O., Dip., (Mombasa Poly), BSc, (Egerton) (Acting)

Senior Technologist

Muraba, D.N., HND, (Kenya Poly) Munyole, B., Dip, HND, (TUK) Waweru, C., Dip, HND, BPhil, (TUK) Wangai, L., Dip, HND, (TUK) Wahome, A., HND, (TUK), MSc, (Egerton) Philip, C.K., Dip, (RTI), HND, (TUK), BPhil, (TUK) Rukenya, E., Dip, (Muranga), HND, (TUK), BPhil, (TUK) Rotich, E.K., Dip, (Eldoret), HND, (TUK) Kinuu, J.K., Dip, (Eldoret), HND, (TUK) Ngugi, W.W., Dip, (TUK), HND, (Mombasa Poly), BPhil (TUK) Oloo, T.O., Dip., (Mombasa Poly), BSc, (Egerton)

Technologists

Wakaminju, S.K., Cert, (Kenya Poly) Mulaku, C.O., Dip, (RTI) Wanyoike, M., Dip, (Mombasa Poly)

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

1.0 INTRODUCTION

The BSc. degree programme in Mechanical Engineering is a 5-year programme that is structured to emphasize both engineering theory and practical skills. These skills should enable students to solve practical problems and analyse different situations by converting concepts into reliable and cost-effective designs of devices and processes.

The programme includes a practical assignment term lasting for eight weeks at the end of the third year of study and industrial attachment of at least eight weeks at the end of fourth year of study.

MASTER OF SCIENCE DEGREE IN MECHANICAL ENGINEERING

1.0 INTRODUCTION

The course is intended for engineers with suitable qualifications and/or professional experience who wish to study further or expand their range of expertise. The course contents will enable students to specialize in any one of the following options:

- a) Advanced Thermo-Fluids Engineering
- b) Advanced Applied Mechanics
- c) Industrial Engineering
- d) Materials Science and Metallurgical Engineering

The common regulations for the Masters degree in all faculties shall be applicable.

2.0 ENTRY REQUIREMENTS

An Upper Second Class Honours degree in Mechanical Engineering or an appropriate branch of Engineering from the University of Nairobi or an equivalent qualification from a recognized University. Candidates with other appropriate education qualifications and professional experience may also be considered on a case by case basis.

The course shall commence at the beginning of the academic year and continue for about 21 months. The degree shall be designated from the following list:-

- i) MSc. Mechanical Engineering Advanced Thermo-Fluids Engineering
- ii) MSc. Mechanical Engineering Advanced Applied Mechanics
- iii) MSc. Mechanical Engineering Industrial Engineering
- iv) MSc. Mechanical Engineering Materials Science & Metallurgical Engineering

The course structure: By coursework (*includes lectures and laboratory work examination and thesis*)

Coursework and examinations - 2 semester of 17 weeks each;

Project work and thesis presentation - 12 months

REGULATIONS AND SYLLABUS FOR BACHELOR OF SCIENCE IN PETROLEUM ENGINEERING

1.0 INTRODUCTION

In 2014, the Ministry of Energy of the Republic of Kenya gave a grant of fifty six million shillings (Kes 56,000,000) to the School of Engineering to support the establishment of a Department of Petroleum Engineering at the University of Nairobi. These funds were advanced to be used for the recruitment of experts in Petroleum Engineering, the procurement of laboratory equipment and furniture for the department.

The Petroleum Engineering undergraduate program at the University of Nairobi is primarily concerned with the economic extraction of oil, gas, and other natural resources from the earth. Producing oil and gas is accomplished through the design, drilling and operation of wells and well systems, and the integrated management of the underground reservoirs in which the resources are found. A minor emphasis

of the petroleum engineering program at the University of Nairobi will be the study of transportation of crude and refined petroleum products as well as downstream activities such as storage and distribution of petroleum products.

The curriculum is tailored to give the students a solid scientific foundation from the start, where in the first year of study, courses in mathematics, physics, chemistry, computer programming are taught as well as other courses in the humanities such as communication skills, philosophy and HIV/AIDS. These courses are common to other disciplines of engineering such as Mechanical and Civil Engineering.

From the second and third year of the program are used to prepared the students in the engineering sciences such as Geology, Solid and Structural Mechanics, Fluid Mechanics, Thermodynamics and Heat Transfer, Mechanics of Machines, Systems and Controls, Engineering Communication as well as Mathematics.

In the Penultimate and Ultimate years of study the students study specialised courses in reservoir engineering, well drilling technology and the evaluation of petroleum formations. In these senior years, students also are expected study broad subjects such as engineering management. In the final year of study, students work on an engineering project that could be experimental or design-based and this exposes them to the design process from concept to the final product, emphasizing effective communication and presentation skills.

3.0 ENTRY REQUIREMENTS

Candidates shall be eligible for admission into the Bachelor of Science degree in the School of Engineering in the following categories.

3.1 KCSE Candidates

The basic admission requirement shall be the minimum requirement set for entry into Public Universities which is a mean grade of at least C+ in Kenya Certificate of Secondary Education (KCSE). In addition, candidates shall have obtained at least C+ in each of the four cluster subjects from any of the following alternative clusters. However, a cut-off grade higher than C+ in each cluster subject shall be preferred if limitations of the number of places available for each degree programme versus the number of qualified candidates so demand. The said cut-off grades shall be determined and implemented by the School Board.

Alternative A:

Physics Chemistry Mathematics

Biology or Geography or any Group IV Subject

Alternative B:

Physical Sciences Geography or any Group IV Subject **Biological Sciences** Mathematics

Group IV Subjects:

Home Science	Building Construction
Art and Design	Power Mechanics
Agriculture	Electricity
Woodwork	Drawing and Design
Metalwork	Aviation Technology

3.1.1 A-Level Candidates

A-level candidates with 2 principals in Mathematics and Physics and a subsidiary level pass in Chemistry with Credit pass in English at O level

3.1.3 KNEC Higher National Diploma (HND) or Equivalent

Candidates with Higher National Diploma in the following broad areas of study:

- Agricultural Engineering i)
- ii) Civil engineering
- iv) Mechanical engineering v) Geospatial Engineering
- iii) Electrical engineering
- Any other approved subject area. vi)

3.1.4 Ordinary KNEC Diploma or equivalent (with credit pass)

- Agricultural Engineering i)
- iv) Mechanical engineering
- ii) Civil engineering iii) Electrical engineering
- v) Geospatial Engineering
- vi) Any other approved subject area.

3.1.5 Diploma from Science/Technical Teacher Training Colleges

Candidates with a Diploma in Mathematics and Physics from recognized teacher training colleges.

3.1.6 BSc/BEd (Science) degrees from Universities or any other relevant degrees

Candidates with a Bachelor of Science in Geology/geological petro-science, chemistry or Physics or Education degree in Physics or Mathematics from recognized institutions or any other relevant degree from a recognized institution.

14.0 COURSES OFFERED IN THE PROGRAMME

FIRST YEAR

FPE 111	Physics I
FPE 112	Physics II
FPE 151	Chemistry I
FPE 152	Chemistry II
FPE 161	Engineering Drawing I (Manual Drawing)
FPE 162	Engineering Drawing II (Computer Aided Drawing)
FPE 165	Communication Skills (CCS004)
FPE 168	Elements of Philosophy (CCS008)
FPE 169	Emerging Health & Social Challenges HIV/AIDS (CCS 010)
FPE 171	Calculus I
FPE 172	Calculus II
FPE 173	Engineering Mechanics I (Statics)
FPE 174	Engineering Mechanics II (Dynamics)
EDE 100	Computer Science I

FPE 182 Computer Science I

SECOND YEAR

- FPE 201 Introduction to Physical geography & Geology
- FPE 202 Introduction to Petroleum Engineering
- FPE 203 Introduction to Geophysics
- FPE 211 Solid and Structural Mechanics I
- FPE 212 Solid and Structural Mechanics II
- FPE 221 Thermodynamics I
- FPE 222 Thermodynamics II
- FPE 231 Fluid Mechanics I
- FPE 232 Fluid Mechanics II
- FPE 242 Non Destructive Testing (NDT)
- Engineering materials science I FPE 251
- FPE 262 Sustainable Development
- FPE 271 Calculus III

FPE 272 Linear Algebra FPE 281 Computer Science II FPE 292 Electrical Circuits THIRD YEAR	FPE 471Statistics for EngineersFPE 472Numerical Methods for EngineersFPE 491Electrical Machines (DC & AC)FPE 492Instrumentation & Control
FPE 311Engineering Mechanics III (Dynamics)FPE 322Petroleum Drilling SystemsFPE 324Reservoir FluidsFPE 321Formation EvaluationFPE 322Process PrinciplesFPE 322Exploration GeophysicsFPE 342Exploration GeophysicsFPE 343Management & Business for EngineersFPE 344Law for EngineersFPE 351Engineering Materials Science IIFPE 353Reservoir Petro-physicsFPE 362Well PerformanceFPE 371Calculus IVFPE 372Mathematical MethodsFPE 391Analogue & Digital ElectronicsFPE 399Petroleum Engineering Field Assignment & weeks = 320 Hours (Equivalent to 110 hours of Instruction or 7 credit hours)	Industrial Attachment FPE 499 – Industrial Attachment At the end of 4th Year, students proceed for Industrial Attachment for a period of 12 weeks.
	FIFTH YEARFPE 503Advanced Production EngineeringFPE 511Advanced Drilling EngineeringFPE 521Petroleum Production SystemsFPE 522Petroleum RefiningFPE 531Reservoir Simulation IFPE 532Reservoir Simulation IIFPE 542Downstream OperationsFPE 543Hydrocarbon Phase BehaviourFPE 544Production EnhancementFPE 551Petroleum EconomicsFPE 561Engineering Project IFPE 562Engineering Project IIEPE 5XXElective I
period of 8 weeks.	FPE 5YY Elective II
FOURTH YEAR FPE 412 Drilling Engineering FPE 413 Well testing and production logging	Elective Courses To offer a level of specialisation, during the 5th year of study, students, with the guidance of the Class Tutor, can select any two courses from the list below
FPE 414Petroleum ChemistryFPE 421Heat TransferFPE 431Production EngineeringFPE 432Reservoir ModelsFPE 444Engineering Project ManagementFPE 452Entrepreneurship for EngineersFPE 461Integrated Reservoir Design I	provided the selected course is on offer.FPE 506Natural Gas EngineeringFPE 508Rock MechanicsFPE 512Fundamentals of Programmable Logic ControllersFPE 513Hydraulic & Pneumatic Control SystemsFPE 514Reliability EngineeringFPE 515Corrosion Engineering
FPE 462 Integrated Reservoir Design II	FPE 552 Petroleum Project Economics

STAFF LIST

Chairman of Department

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Professor

Misoi, G.K., BSc, PhD, (Nairobi) Mutuli, S.M., BSc, MSc, (Nairobi), PhD, (Poitiers, France) Rading, G.O., BSc, MSc, (Nairobi), PhD, (Alabama), REng

Associate Professor

Oduori, F.M., BSc, (Nairobi), MEng, (Asian I.T. Bangkok), Dr. Agr. (Kyushu) Nyangaya, J.A., BSc, (Nairobi), MSc, (Leeds), PhD, (I.I.T. Delhi), REng Ogola, J.M., BSc, (Nairobi), MEng, (Sierra Leone), PhD, (Nairobi), REng, MIEK

Senior Lecturer

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Lecturer

Gachigi, K, BSc, (Bath, UK), MSc, PhD, (Penn. State) (*Leave of Absence*) Kabugo, S.M., BSc, MSc, (Nairobi) Misango, Q.B.O., BSc, MSc, (Nairobi) Munyasi, D.M., BSc, MSc, (Nairobi), REng Mwaka, M., BSc, (Nairobi), MSc, (Manitoba), REng Odhiambo, A.E., BSc, (Nairobi), MPhil, (QMUL)

DEPARTMENT OF GEOSPATIAL AND SPACE TECHNOLOGY

1.0 PREAMBLE

The Department of Geospatial and Space Technology offers a Bachelor of Science in Geospatial Engineering [(BSc. (Geospatial Engineering)] degree. This degree program is a result of an intensive curriculum review from Bachelor of Science in Surveying to the current program. This change was necessitated by modern developments in the broad field of geospatial technology. In particular, the modern developments in the areas of space technology, information technology, and communication technology have tremendously influenced how positioning, navigation and geospatial modeling are carried out today. To this extent, it is today widely recognized that the disciplines of measurement and mapping that were previously collected under the Surveying (or Land Surveying) can no longer be adequately described by the term **"Surveying"**. These factors as well as the need to be current and relevant in what the Department offers to its students meant that the Department must completely redefine both the Undergraduate and Postgraduate curricula.

2.0 COURSE OBJECTIVES

The broad objectives of this study can be stated as follows:

- i) To impart to the students the necessary knowledge, skills and professional attitudes demanded by industry in the broad area of Geospatial Engineering today and in the foreseeable future.
- **ii)** To lay the intellectual foundation necessary for our graduates to play their full roles in the evolution of Geospatial Engineering.
- iii) To introduce the students to other disciplines closely related to Geospatial Engineering in order for them to appreciate the interrelationships between Geospatial Engineering and the respective disciplines, and to provide them with the opportunity to consider careers in the related disciplines should they so desire.
- iv) To introduce the students to certain advanced topics in selected areas of Geospatial Engineering in order to motivate them towards further studies or specialized practice in those areas.

MASTER OF SCIENCE IN SURVEYING

1.0 INTRODUCTION

Over the last decade or so, there has been increasing diversity and sophistication in the discipline of surveying and mapping sciences. This has resulted in a greater demand for high level manpower in industry, teaching and research. The department has responded to this need by offering a Master of Science degree in Surveying by coursework, examination and thesis.

2.0 ENTRY REQUIREMENTS

The following shall be eligible for admission into the programme:

- a) A holder of an upper second honours degree of Bachelor of Science in Surveying of the University of Nairobi.
- **b)** A holder of similar qualifications from other institutions recognised by the Senate as equivalent to the Bachelor of Science degree in Surveying of the University of Nairobi.

REGULATIONS AND SYLLABUS FOR THE POSTGRADUATE DIPLOMA IN GEOGRAPHIC INFORMATION SYSTEMS

1.0 INTRODUCTION

The proliferation of numerous applications in Geographic Information Systems (GIS) has generated a great demand for well trained personnel, especially in developing countries like Kenya where the GIS industry is still young but growing fast. In response to this demand, and within the realm of Continuous Professional Development (CPD), the Department of Geospatial and Space Technology, University of Nairobi, offered short (certificate) courses in GIS for a while. Experience gained from this CPD programme indicated that most of the professionals currently working in the local GIS industry lack formal GIS training and the required capacity to effectively manage GIS projects. The above factors provide the impetus for launching the proposed Postgraduate Diploma in Geographic Information Systems [P.G. Dip. (GIS)]. This programme is designed to accommodate the diverse interests of professional from different backgrounds currently working or aspiring to work in the GIS industry. This is pertinent especially given the multidisciplinary nature of GIS.

2.0 COURSE OBJECTIVES

- i) Equip students with the relevant skills and knowledge to pursue careers in the GIS industry as GIS practitioners and educators.
- **ii)** Provide students with comprehensive knowledge of the functionality and applications of GIS technology.
- iii) Expose students to the design and implementation of GIS projects.

3.0 ENTRY REQUIREMENTS

The common regulations for postgraduate studies at the University of Nairobi shall apply.

Candidates for the Postgraduate Diploma in GIS should be holders of a Bachelor's Degree of the University of Nairobi in any geoinformation discipline or equivalent qualifications from institutions recognized by the Senate.

REGULATIONS AND SYLLABUS FOR THE MASTER OF SCIENCE IN GEOGRAPHIC INFORMATION SYSTEMS

1.0 INTRODUCTION

The proliferation of numerous applications in Geographic Information Systems (GIS) has generated a great demand for well trained personnel, especially in developing countries like Kenya where the GIS industry is still young but growing fast. In response to this demand, and within the realm of Continuous Professional Development (CPD), the Department of Surveying, University of Nairobi, has been offering short (certificate) courses in GIS for the last three years. Experience gained from this CPD programme indicates that most of the professionals currently working in the local GIS industry lack formal GIS training and the required capacity to effectively manage GIS projects. The above factors provide the impetus for launching the proposed Master of Science in Geographic Information Systems [MSc.(GIS)]. This programme is designed to accommodate the diverse interests of professionals from different backgrounds currently working or aspiring to work in the GIS industry. This is pertinent especially given the multidisciplinary nature of GIS.

2.0 COURSE OBJECTIVES

- i) Equip students with the relevant skills and knowledge to pursue careers in the GIS industry as GIS practitioners and educators.
- **ii)** Provide students with comprehensive knowledge of the functionality and applications of GIS technology.
- iii) Expose students to the design and implementation of GIS projects.
- iv) Equip students with the relevant skills and knowledge to carry out research in GIS.

3.0 ENTRY REQUIREMENTS

The common regulations for the Masters degrees in the University of Nairobi shall apply.

The following shall be eligible for admission:

- a) Holders of a Bachelor's degree in any geoinformation related discipline with at least lower second class honours of the University of Nairobi, or equivalent qualifications from other institutions recognized by the Senate.
- b) Holders of a Bachelor's pass degree with a Postgraduate Diploma in Geographic Information Systems [PG.Dip.(GIS)] or equivalent qualifications from other institutions recognized by the Senate.
- c) Holders of a Bachelor's pass degree in any geoinformation related discipline and three years experience in GIS.

STAFF LIST

Chairman of Department:

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Professor

Aduol, F.W.O., BSc, MSc, (Nairobi), Dr.-Ing.(Stuttgart), MISK (*on leave of absence*) Mulaku, G.C., BSc, (Nairobi), PGDip, (ITC), MSc, (Calgary), PhD, (New Brunswick), MISK, Lic. Surv,(K)

Associate Professor:

Kiema, J.B.K, BSc, MSc, PGDip. (Comp.Sc.), (Nairobi), Dr.-Ing., (Karlsruhe) (on leave of absence)

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Lecturer:

Mwenda, J.N., BSc, (Nairobi), MEng, (New Brunswick, Canada), MSc, (KTH), MISK, CLS (EA), Lic. Surv,(K) Okumu, B.M., BSc, (Nairobi), MSc, (New Brunswick), MISK, CLS (EA), LS (K) Wakoli, P.C., BSc, (Nairobi), MSc, (London,UK)

Tutorial Fellow:

Matara, S.M., BSc, (Nairobi), MSc, (Politecnico di Torino, Italy), MISK Mwaniki, M., BSc, (JKUAT), (G&G in Sys), MSc, (G in Sys&RS Mugo, B., BSc (GE), MSc (GIS), (Nairobi) Asala, L., BSc (Surv), MSc (GIS), (Nairobi)

Details on specific admission requirements of the school, credit transfer and exemptions, course structure and duration, examination regulations, course outline and award of degree may be obtained from the School.

Please contact: The Dean, School of Engineering Tel: 254-020-3318262 Email: dean-engg@uonbi.ac.ke

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INSTITUTE OF NUCLEAR SCIENCE AND TECHNOLOGY

Director of Institute: Prof. Gatari, M.J.G., PhD Environ. Sci. (Physics bias), Lic. Phil in Environ. Sci. (Physics bias) (Chalmers/Goteborg, Sweden), Higher Dip. (Electrical & Electronics), (Kenya Polytechnic)

1.0 INTRODUCTION

The Institute of Nuclear Science is part of the College of Architecture and Engineering at the University of Nairobi. It was started in 1979 as a Centre for Nuclear Science Techniques within the School of Engineering following recommendations by the National Council for Science and Technology (NCST) and with technical assistance from the Government of Kenya and the International Atomic Energy (IAEA). The Institute has mandate to:

2.0 **COURSE OBJECTIVES**

- i) Train the local manpower in the applications of experimental nuclear techniques.
- Study and utilize peaceful uses of nuclear technology in the country. ii)
- iii) Use nuclear analytical techniques in analysis of a wide variety of materials.
- Provide services to other Departments, Private and Government Institutions. iv)

PROGRAMMES AND ACTIVITIES

MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY DEGREES IN **NUCLEAR SCIENCE**

The Institute offers MSc. and PhD. degrees in Nuclear Science. The thesis work is determined from the course work and interdisciplinary research programmes in the Physical and Biological Sciences.

STAFF LIST

Director of Institute (Ag.):

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Lecturer:

Maina, D.M., BSc (Chem.), MSc (Chem.), (Nairobi), MSc (Applied Radiation Physics), (Birmingham, UK) (Deceased) Mangala, M.J., BSc, MSc, (Nairobi)

Tutorial Fellow:

Wafula, J.C., BSc, (Nairobi), MSc, (Oldenburg)

Chief Technologist:

Matini, A.O., HND, (Kenya Poly) Oreacque, R., HND, (Kenya Poly)

Details on specific admission requirements of the school, credit transfer and exemptions, course structure and duration, examination regulations, course outline and award of degree may be obtained from the Institution.

Please contact: The Director Institute of Nuclear Science and Technology Tel: 254-020-3318262 Email: inst@uonbi.ac.ke