



THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD AND TOBAGO, WEST INDIES

FACULTY OF ENGINEERING

SENIOR LECTURER/LECTURER IN ENGINEERING GRAPHICS AND MACHINE DESIGN

Qualification

1. Ph.D.in Mechanical Engineering with Specialization in Machine Design

Experience/Training

1. Considerable experience in the delivery of Machine Design and Development and/or Engineering Graphics courses at both the undergraduate and postgraduate levels, in internationally accredited engineering programmes;
2. Related design and development industrial experience;
3. Relevant training in technical education and CADD packages
4. Workshop technology, manufacturing processes, prototype development and testing.
5. Track record in refereed publications and involvement in submitting successful grant applications

Special Responsibilities

1. Lecture in Engineering Graphics, Machine Design including CADD - including course preparation and delivery,
2. Development of appropriate laboratory exercises
3. Supervision of design projects,
4. Supporting graduate research students.

Personal Attributes

1. Demonstrate teaching and instructional leadership in Engineering Graphics and Design
2. Demonstrate research leadership
3. Be a team player and be willing to work with various departmental research groups and students
4. Creative and innovative
5. Student centered

Applications (two copies) should be sent to the Campus Registrar, The University of the West Indies, St. Augustine, Trinidad and Tobago, W.I., Fax No. 1-868-663-9684. Full CV and application forms which must be completed fully and can be obtained at the above address and at <http://www.sta.uwi.edu> must be submitted. The names and addresses of three (3) referees (one of whom should be from your present organization) must be indicated. In order to expedite the appointment procedures, applicants are advised to ask their referees to send references under CONFIDENTIAL cover DIRECTLY to the Campus Registrar at the above address without waiting to be contacted by the University.

DEADLINE FOR APPLICATION IS 2012 JANUARY 20

**THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD, WEST INDIES
FURTHER PARTICULARS FOR THE POST OF SENIOR
LECTURER IN ENGINEERING GRAPHICS AND MACHINE
DESIGN IN THE DEPARTMENT OF MECHANICAL
AND MANUFACTURING ENGINEERING
FACULTY OF ENGINEERING**

GENERAL

The University of the West Indies is the University serving the following English-speaking countries in the West Indies:

Antigua & Barbuda	Jamaica
The Commonwealth of the Bahamas	Montserrat
Barbados	St. Christopher & Nevis
Belize	St. Lucia
The British Virgin Islands	St. Vincent & the Grenadines
The Cayman Islands	The Republic of Trinidad & Tobago
The Commonwealth of Dominica	
Grenada	

Background to The University

The University has campuses at Cave Hill in Barbados, St. Augustine in Trinidad and Tobago and Mona in Jamaica. The University has also recently established a fourth campus, the Open Campus, which is responsible for the delivery of programmes by the distance mode. The current student body population (face to face mode) which is approximately 40,000, is distributed among the Faculties of Law, Humanities and Education, Pure and Applied Sciences, Social Sciences and Medicine at Cave Hill; Humanities and Education, Medical Sciences, Social Sciences and Pure & Applied Sciences at Mona; and Science & Agriculture, Engineering, Humanities & Education, Social Sciences and Medical Sciences (including pharmacy, dentistry, veterinary sciences and nursing) at St. Augustine.

The University began teaching in 1948 as a University College affiliated with the University of London, and became an independent University in 1962. In 1963, Colleges of Arts and Sciences were set up at Cave Hill and St. Augustine. The former represented the institution of the third campus, while the latter was an extension of the facilities provided at St. Augustine, where the Faculties of Agriculture and Engineering were already established. The Faculty of Law was established in 1970. The University of the West Indies is now a dual mode institution offering teaching by distance education as well as face-to-face.

**THE DEPARTMENT OF MECHANICAL ENGINEERING AND
MANUFACTURING ENGINEERING**

The Department of Mechanical and Manufacturing Engineering, which delivers the teaching, Programmes in Mechanical, Industrial and Mechanical with a Biosystems Minor Engineering at the Undergraduate Level and Production Engineering and Management at the Postgraduate Level has the following laboratories and equipment in the following major areas:

- Internal Combustion Engines
- Steam
- Combustion
- Air-conditioning and Refrigeration
- Energy
- Mechanics of Materials
- Mechanics of Machines
- Experimental Stress Analysis
- Metal Forming
- Foundry
- CNC Machining
- Metrology
- Metallurgy & Non-destructive Testing
- Industrial Automation
- Controls
- Agricultural Mechanization
- Agricultural Product Processing
- Pattern and Sand Processing Laboratory

These laboratories are used both for our Undergraduate teaching Programmes and for Postgraduate research.

A network of Personal Computers, Workstations and CAD Laboratory serves the computing needs of the Department, which are connected to the Faculty's main computing center.

The Department has a cluster of Micro Computers, which are linked, to the Faculty VAX 1130 Main Frame. The computing facilities in the Department are to be expanded and a new CAD laboratory was established in 1995/96. Additionally, the Department also runs a Mac Lab.

The Department of Mechanical and Manufacturing Engineering offers a three-year Honors Degree Programme leading to the Bachelor of Science Degree (Mechanical, Biosystems, Industrial Engineering). The normal entry requirement for students is the General Certificate of Education (GCE) Advanced Level with passes in Physics and Mathematics, as a minimum. It also offers a one-year full-time (or two-year part-time) Degree Programme leading to the Master of Science Degree in Production Engineering, Engineering Management or Production Engineering and Management.

Programmes leading to the Research Degrees of Master of Philosophy (MPhil) and Doctor of Philosophy (Ph.D.) are also offered by the Department in Mechanical, Industrial and Agricultural Engineering. This has already been achieved for the Master's Programme in Industrial Engineering and the Master's and Doctoral Programmes in Agricultural Engineering.

Continuing Education Short Courses, Workshops and Seminars are part of the Departmental activities offered in conjunction with the other Departments in the Faculty of Engineering as well as with other Institutions such as the Association of Professional Engineers of Trinidad and Tobago. These are usually mounted through the Faculty's Engineering Institute.

UNDERGRADUATE ENROLLMENT

In 2006/2007 the undergraduate enrollment are as follows:

Year I	Mechanical Engineering with minor in Biosystems Engineering Industrial Engineering Mechanical Engineering
Year II	Mechanical Engineering with minor in Biosystems Engineering Industrial Engineering Mechanical Engineering
Year III	Mechanical Engineering with minor in Biosystems Engineering

Industrial Engineering Mechanical Engineering

In the M.Sc. Production Engineering and Management Programmes total student enrollment was 109.

In the MPhil and Ph.D. Programmes (Mechanical Engineering, Industrial Engineering and Agricultural Engineering) total student enrollment was 6.

LIST OF CURRENT MEMBERS OF ACADEMIC STAFF

Edwin Ikenna Ekwue BEng (Nigeria), MSc, PhD (Cranfield), MASAE, MNSAE	Professor and Head Mechanical and Manufacturing Eng.
Gurmohan S. Kochhar, BE (Baroda), MS (Wisconsin), PhD (UWI), MASME, MASHRAE, FAPETT	Professor of Mechanical & Manufacturing Engineering
Clement K. Sankat BSc (Eng), MSc (UWI), PhD (Guelph), AMASE, AMIAgrE	Professor Agricultural and Food Engineering
Chanan S. Syan BEng (UK), PhD (UK) FIMEchE, MIEE, MBSC, CITP	Professor of Production Eng. and Mgmt
Kit Fai-Pun PhD (Management), MPhil (Information Sys.), M.Sc. (Applied Comp. Tech.), MEd (Education Management), DipM (Markt), M.Sc. (Tech. Econ.)	Professor & Senior Lecturer Industrial Eng.
Clement A.C. Imbert BSc (Eng) (UWI), MScTech (Brunel), PhD (UWI), FAPETT,	Professor Mechanical & Manufacturing

MASME, Reng	Engineering
Winston G. Lewis BSc (Eng), MPhil (UWI), PhD (Tuns), MAPETT, MISS MTSISS, Reng	Professor Mechanical Eng., & Manufacturing Engineering
Anantharaman Naganathan PhD (Eng), (IIT), ME (Production Eng) (Annamalia), BE (Eng) (Annamalia)	Senior Lecturer Mechanical & Manufacturing Eng.
Subhas Chandra Haldar Ph.D. (IIT, Kharagpur), Master of Tech (IIT, Madras), BEng (BE College, Calcutta Univ.),	Lecturer Mechanical & Manufacturing Eng.
Srirangapattanam Y. Keshavan BE (Bangalore), ME, PhD (IIS)	Senior Lecturer Mechanical & Manufacturing Eng.
Jacqueline Bridge B.Sc. (Eng) (UWI), Ph.D. (Cornell) Dip.Ed. (UTech)	Lecturer Mechanical & Manufacturing Eng.
Boppana V. Chowdary BTech (Nagarjuna), MTech, Ph.D. (IIT Delhi)	Lecturer Mechanical & Manufacturing Eng.
Ruel Ellis BSc (Industrial) (UWI) MSc (Brunel) (England)	Lecturer Industrial Eng.
Krishpersad Manohar BSc (Eng), PhD (UWI) AMASME, AMASHRAE	Lecturer Mechanical & Manufacturing Eng.
Sennen Matabadal BSc, MSc (UWI)	Honorary Lecturer Mechanical & Manufacturing Eng.

The above teaching staff is supported by eight (8) Graduate/Research Assistants and a complement of Part-time Demonstrators and Lecturers.

COURSES OFFERED BY THE DEPARTMENT

The Department offers B.Sc. programmes of study in Industrial and Mechanical Engineering with a Minor in Biosystems Engineering. The curriculum for the first year of these programmes (Semester I and II) is common. Courses are mounted by the Department and students also take courses from other Departments of the Faculty and the University. Core courses offered by the Department are as follows:

YEAR 1 COMMON COURSES – MECHANICAL, INDUSTRIAL, BIOSYSTEMS

CH13A	Science of Material
CS12A	Computing & Numerical Methods
M17A	Engineering Mathematics I
ME10A	Engineering Graphics
ME13A	Engineering Statics
ME15A	Introduction to Engineering
ME16A	Introduction to Strength of Materials
CE11B	Mechanics of Fluids I
EE18B	Electrical Engineering Technology
ME11B	Engineering Thermodynamics I
ME12B	Engineering Drawing & Design
ME13B	Engineering Dynamics
ME14B	Workshop Technology

Year 2 Mechanical Engineering with Minor in Biosystems Engineering

EE20A	Electromechanical Energy Conversion (EE18B)
M26A	Engineering Mathematics II (M17A)
ME20A	Heat & Mass Transfer
ME21A	Strength of Materials I (ME16A)
ME22C	Mechanics of Machines (ME13B)
ME23A	Engineering Design I
M26B	Statistics
ME21B	Strength of Materials II (ME16A)

ME22B	Mechanical Vibrations (ME13B)
ME23B	Engineering Design II
ME24B	Engineering Thermodynamics II (ME11B)
ME25B	Manufacturing Technology (ME14B)

Year 3 Mechanical Engineering

ME302	Mechanical Engineering Project
ME30A	Engineering Management I
IE32A	Control Systems Technology
ME31C	Production Management
ME32C	Energy Engineering (ME24B)
IE32A	Control Systems Technology
ME31C	Production Management
ME32C	Energy Engineering (ME24B)
ME33A	Advanced Mechanics of Solids (ME21A, ME21B)
ME34A	Product Design & Development
ME35A	Materials Technology
ME36A	Maintenance & Safety Engineering
AE30A	Traction & Earthworking Eq.
ME30B	Engineering Management II
EE36C	Industrial & Commercial Electrical Systems
ME32D	Power Plant Engineering (ME 24B)
ME33C	Environmental Control Engineering (ME24B)
ME34B	Computer-aided Design & Manufacture
ME37B	Finite Element Methods in Engineering Practice (CE11B, ME20A, ME33A)
IE32C	Automation

M.Sc. Production Engineering and Management

ME62G	Production Technology (ME25B)*
ME62H	Machine Tools Technology
ME62K	Applied Materials Technology (ME35A)
ME62L	Robotic Technology & Applications
ME64G	Production Planning and Control
ME64H	Advanced Production Management (ME31A)
ME64K	Human Resource Management I
ME64L	Human Resource Management II
ME64M	Maintenance Engineering & Management

ME64N	Total Quality Management
ME65G	Industrial Marketing
ME65H	Statistical Methods in Engineering
ME65K	Financial Management
ME65L	Applied Operations Research (OR I & OR II)
ME65M	Technology & Product Development (ME34A)
ME65N	Industrial Health and Safety
ME65Q	Project Management
ME660	Research Project

Research Programmes

The Department has laboratory facilities in Biosystems, Industrial and Mechanical Engineering to support its teaching and research functions.

- (i) Thermodynamics, Heat Transfer and Renewable Energy Resources
- (ii) Manufacturing Technology and Materials
- (iii) Operations and Production Management
- (iv) Instrumentation, Control, Manufacturing, Automation and Robotics
- (v) Artificial Intelligence
- (vi) Theoretical and Applied Mechanics
- (vii) Agricultural Mechanization and Design
- (viii) Processing, Post Harvest Technology, Food Harvesting
- (ix) Soil and Water Engineering

Further information on the research currently in progress is available from the Head, Department of Mechanical and Manufacturing Engineering.

FURTHER DETAILS OF POST

Senior Lecturer/Lecturer - Engineering Graphics and Machine Design

Applicants for the above-named post will be required to carry out teaching, research and industrial outreach activities for Mechanical Engineering.

QUALIFICATIONS

PhD in Mechanical Engineering with Specialization in Machine Design

EXPERIENCE

An adequate mix of teaching, research and industrial experience:

- Bachelor's degree in Mechanical Engineering or equivalent.
- Doctoral degree in the area of Engineering Design
- Graphical communication skills
- Knowledge of Computer Aided Drafting and Design (CADD) and simulation packages

SPECIAL RESPONSIBILITIES

- Teach Engineering Graphics, Machine Design including CADD-this includes course preparation and delivery the development of appropriate laboratory supervision of design projects, examinations and supporting graduate research students.

AREAS OF SPECIALIZATION/ COMPETENCIES

- Relevant training in technical education and CADD packages
- Related design and development industrial experience
- Workshop Technology, Manufacturing processes, prototype development and testing.

PERSONAL ATTRIBUTES

- Demonstrate teaching and instructional leadership in Engineering Graphics and Design
- Demonstrate research leadership with a track record in refereed publications and involvement in submitting successful grant applications
- Be a team player and be willing to work with various departmental research groups and students
- Be creative and innovative
- Be student centered

Remuneration Package

ANNUAL SALARY RANGE (US\$1.00 = TT\$6.3)

Senior Lecturer: TT\$308,400 x \$6,072 - \$363,156/\$375,924 x \$6,072 - \$382,308

Lecturer: TT\$217,140 x \$6,072 - \$253,644 / \$271,896 x \$6,072 - \$302,316

Benefits:

- Special allowance of 6% of basic salary;
- Transportation Allowance of TT\$2,300 per month ;
- Up to five economy class passages plus baggage allowance of US\$1,800 (TT\$ equivalent) on appointment and normal termination;
- Unfurnished accommodation at 10% or furnished at 12½% of basic salary, or housing allowance of 20% of basic salary to staff making own housing arrangements;
- UWI contribution of equivalent of 10% of basic salary to Superannuation Scheme;
- Annual Study and Travel Grant (available after first year of service);
- Institutional Visit Allowance;
- Book Grant.

St. Augustine
File No.: 173/2/12-1 II
2011/05/16
en