

THE ROYAL TECHNICAL COLLEGE
OF
EAST AFRICA

Incorporating the Gandhi Memorial Academy



ADVANCE PROSPECTUS

Issued June, 1955

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1955

THE ROYAL TECHNICAL COLLEGE
OF EAST AFRICA

Incorporating the Gandhi Memorial Academy

Visitor :

His Excellency The Honourable Sir EVELYN BARING,
K.C.M.G., K.C.V.O.



Postal Address : Private Bag, Nairobi.

Telephone Number : 24078, Nairobi.

UNIVERSITY OF NAIROBI

GOVERNING COUNCIL

Appointed by the East Africa High Commission

Chairman : G. P. Willoughby, Esq., O.B.E.

Vice Chairman : The Honourable C. D. Newbold, Q.C.,
M.L.A.

Appointed by the Government of Kenya

Lady Sidney Farrar, M.B.E.

Kirpal Singh Sagoo, Esq.

Appointed by the Government of Tanganyika

The Honourable Director of Education,

The Honourable F. Hinds, M.L.C.

Appointed by the Government of Uganda

Dr. J. B. Hutchinson, C.M.G.

The Honourable M. E. Kawalya-Kagwa, O.B.E., M.L.C.

Appointed by the Advisory Committee on Colonial Colleges of Arts, Science and Technology

Sir David Lindsay Keir, M.A., LL.D.

Appointed by the East African Association of Engineers

H. R. Bridger, Esq., C.B.E.

Appointed by the Association of Chambers of Commerce and Industry of Eastern Africa

S. McKnight, Esq.

Appointed by the City Council of Nairobi

Alderman I. Somen, M.B.E.

Appointed by the Gandhi Memorial Academy Board

The Honourable A. B. Patel, C.M.G., M.L.C.

Appointed Ex Officio as Principal

Major General C. Bullard, C.B., C.B.E.

Appointed Ex Officio as Dean

G. W. Pollard, Esq., D.T.P. (Edin), A.R.I.B.A.

Appointed to Represent the Board of Studies

W. Rodgers, Esq., M.A., A.M.I.I.A., F. Comm.A., F.R. Econ.S.

J. E. Taylor, Esq., M.Sc.Tech., A.M.I.Mech.E.

DEPARTMENTS

ARCHITECTURE AND ART

ARTS

COMMERCE

DOMESTIC SCIENCE

ENGINEERING

SCIENCE

STAFF

Principal :

MAJOR GENERAL C. BULLARD, C.B., C.B.E.,
B.Eng., M.I.Mech.E., M.I.E.E., M.I.I.A.

Dean:

Head of Department of Architecture & Art :
G. W. POLLARD, D.T.P.(Edin), A.R.I.B.A.,

Head of Department of Arts :
TO BE APPOINTED

Head of Department of Commerce :
W. RODGERS, M.A., A.M.I.I.A., F.Comm.A., F.R.Econ.S.

Lecturer in Charge, Department of Domestic Science :
Mrs. B. FROST.

Head of Department of Engineering :
J. E. TAYLOR, M.Sc.TECH., A.M.I.MECH.E.

Head of Department of Science :
W. T. TREWARTHA, B.Sc., F.R.A.S.

Librarian :

D. A. R. KEMP, B.A., F.L.A.

SESSION 1956

Terms and Vacations

FIRST TERM - MARCH 5th to JULY 13th
SECOND TERM - AUGUST 13th to DECEMBER 21st

FOREWORD

The Foundation Stone of the Royal Technical College of East Africa was laid by His Excellency Sir Philip Mitchell, G.C.M.G., M.C., on 25th April, 1952. In the course of his address he expressed the hope and belief that the College would grow to be a University Institution of Science and Technology which would be recognised in the world outside East Africa and would serve for the generations to come as an invaluable part of the foundations of the new society which we are building here.

Mr. G.P. Willoughby, O.B.E., who, as Chairman of the Governing Council, has administered the development of the College since its inception, stated on the same occasion that the purpose of the College was to satisfy the need in East Africa for the technical education of its young people in face of the increasing and widespread influence of technology in every phase of modern life.

The financial support which has enabled the College to be built and equipped has come from several sources. The Government of the United Kingdom has contributed, as have also the Governments of the East African Territories. The Gandhi Memorial Academy Society has made very generous contributions and has also inspired a large donation from the Gandhi Smarak Nidhi Trust Fund in India. Recently, the United States Foreign Operations Administration has made a substantial grant to extend the initial building and to supplement the basic engineering equipment. In addition, commercial and industrial concerns are contributing generously to the College's Endowment Fund.

Students who enter the College will be conscious of the abundant faith, energy and generosity of the Governments, Institutions and individuals who have brought the College into existence and of the privilege and responsibility which will be theirs in founding and maintaining a student tradition which will be worthy of these efforts.

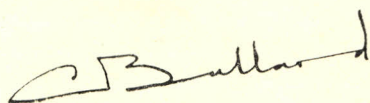
For those who are contemplating being amongst the first to enter the College on the momentous occasion of its opening, this Advance Prospectus is being issued in a form which confines itself to giving briefly the information which they will require.

It describes the general background of the College and the main principles upon which college life and tradition will be esta-

blished. It also describes the standards of entry and the stages of higher education which the students will be able to attain.

The Heads of Departments and other members of staff will be qualified to conduct courses equal in standard to similar courses in the United Kingdom and aiming at the same qualifications.

As the more specialized technological requirements of East Africa and of students themselves become apparent, the scope of the departments and courses outlined herein will be widened accordingly.

A handwritten signature in black ink, appearing to read "C. B. Bullard". The signature is written in a cursive style with a long horizontal stroke extending to the right.

PRINCIPAL.

REGULATIONS

1. Age of Admission

The minimum age of admission to the College will be 17.

2. Conditions of Admission

All classes will be open to students of either sex. The minimum educational requirement for admission to a full-time College Course will be the possession of a Cambridge Oversea School Leaving Certificate or an equivalent qualification approved by the Governing Council. All students will be interviewed by the Head of Department concerned prior to admission.

3. Attendance and Punctuality

Regular attendance and strict punctuality are required at all classes.

The Head of Department should be informed immediately of reasons for unavoidable absence. A student may not be absent from a class for reasons other than illness except with the express permission of the Head of Department.

4. General Conduct

Students are required to conduct themselves in a quiet and orderly manner. Smoking is not allowed in lecture rooms, laboratories, library, etc.

Students must respect the College buildings and must not deface or damage College property or equipment.

Students will be held responsible for any loss or damage done by them to materials and tools belonging to the College while in their possession. They may not borrow College tools or equipment for use outside the College.

5. Change of Address

Changes of address should be notified immediately to the Registrar.

6. Personal Property

The Council cannot be responsible for damage to or loss of personal property in College or Hostel buildings.

7. Accommodation for Vehicles

Space will be allocated for the parking of students' cars and cycles. Students must keep their vehicles within the areas designated. The College cannot accept responsibility for loss or damage to students' cars or cycles.

8. Infectious Illness

Students suffering from, or who have been in contact with, infectious illness may not return to the College until a medical certificate has been received by the Registrar, stating that there is no further danger of communicating infection.

9. Neglect of Duties, Misconduct, etc.

The Principal has the right to suspend any student from continuing his attendance at any course or classes.

GENERAL INFORMATION

1. Hostels

Separate accommodation for men and women students will be available in study bedrooms. There will be adequate Dining and Common Room facilities, set in pleasant grounds.

The boarding fee will be £100 per session. Students will provide their own linen and blankets. Laundry facilities will be available.

2. Refectory and Dining Halls

The following service will be available at reasonable prices to all students:-

- a. Light refreshments during break periods served in Refectory.
- b. Luncheon and light evening meal in Refectory for day students

Boarders will have all main meals provided in Hostel Dining Halls.

3. Lockers

A private locker may be secured for the Session on pre-payment at the College Office of 5/-, of which 2/- will be recoverable upon return of the key. The College authorities will not be responsible for any property left in these lockers, which must be kept clean.

4. College Shop

The shop will supply, at reasonable prices, all text books, instruments, and other materials necessary for the student.

5. Library

An extensive collection of current books, relating to all courses and allied subjects, will be maintained in the College Library. Professional and technical periodicals will be available in the reading room.

The Library is primarily for reference, but certain books may be borrowed for short periods.

Silence and order must be preserved in the Library and students will be held responsible for loss or damage to books while in their possession.

6. Student Activities

Membership of the College Student Society is open to all students and will be compulsory for whole time students.

A Students' Representative Council will be elected and Students' Clubs will be formed to provide for the more serious side of College life and for sport, entertainment and relaxation.

7. Bursaries

The Kenya Government has made available bursaries for suitably qualified students who otherwise would be unable to pursue a course of study without financial assistance. These bursaries cover tuition, books and residential fees to an extent depending on the financial circumstances of the student's family, are tenable for one year at a time and are renewable year by year subject to satisfactory progress on the part of the holder.

It is expected that other bursaries will also be available.

DEPARTMENT OF ARCHITECTURE AND ART

Head of Department: G. W. Pollard, D.T.P. (Edin), A.R.I.B.A.,
F.R.I.A.S., F.R.S.A.

ARCHITECTURE

The courses will be conducted by a teaching staff of experienced qualified Architects, aided by specialists in all allied artistic and technical subjects.

The primary function of the Department is to train students for the profession of Architecture.

A broad and systematic full-time training embracing all aspects of Architectural practice, with emphasis on modern building methods and techniques, will prepare the student for independent practice or for employment in Government and Public Service.

All students will be expected to become members of the various classes of the R.I.B.A. as soon as they are eligible. Registration as Probationer should take place during the first year, and the Intermediate R.I.B.A. Examination should be taken at the end of the third year.

Students should be ready to present themselves for the R.I.B.A. Final Examination at the end of the fifth year.

Substantial periods of the long vacations will require to be spent in the offices of practising architects. Visits will also be made to building works in progress.

The first year of study will be probationary and students will only be allowed to continue the course thereafter provided their progress has been such as to justify their further attendance.

A College Certificate in Architecture will be awarded upon successful completion of the Third Year course and examination.

A Diploma in Architecture will be awarded by the College to students who have obtained the College Certificate and successfully completed the Fourth and Fifth Year courses and have passed the College Final Examination.

Candidates who have followed an approved course of study elsewhere and have passed the R.I.B.A. Intermediate Examination may be allowed to complete the Diploma Course in a period of not less than three years.

The following courses will be offered initially:-

- I. **Certificate Course** leading to Intermediate R.I.B.A. Examination.

First Year

Freehand Drawing, Lettering, Sciagraphy, Perspective.

General History of Architecture and Art.

Theory of Design.

Building Construction I.

Graphic Statics, Mechanics and Strength of Materials.

Studio Work :

- a. Architectural Design I.
- b. Constructional Drawing I.
- c. Measured Drawing.

Outdoor sketching and model making.

Second Year

Special History of Architecture.

Theory of Architectural Design.

Building Construction II.

Materials and Structures.

Studio Work:

- a. Architectural Design II.
- b. Constructional Drawing II.
- c. Colour.
- d. Measured Drawing.

Outdoor sketching and surveying.

Third Year

Building Construction III.

Steel and Concrete Construction.

Studio Work:

- a. Architectural Design III.
- b. Constructional Drawing III.
- c. Colour and Interior Decoration.
- d. Life Drawing.

Building Science.

At this stage the student will take the R.I.B.A. Intermediate Examination and will be presented for his College Certificate in Architecture.

2. **Diploma Course** leading to Final R.I.B.A. Examination

Fourth Year

Building Construction IV.

Hygiene and Specialized Requirements of Building.

Specification, Properties and Uses of Building Materials.

Acoustics.

Advanced Steel and Concrete Construction.

Studio Work:

- a. Architectural Design IV.
- b. Constructional Drawing IV.
- c. Life Drawing.

Fifth Year

Professional Practice.

Studio Work:

- a. Architectural Design V.
- b. Constructional Drawing V.

Thesis.

At this stage the student will take the R.I.B.A. Final Examination and will be presented for his College Diploma in Architecture.

Candidates who have taken the Diploma must pass the R.I.B.A. Examination in Professional Practice before they can qualify for Associateship of the R.I.B.A.

A year's practical experience must be completed prior to the candidate presenting himself for this examination.

Equipment and Expenses

All travelling and subsistence expenses incurred while carrying out work as part of the curriculum must be met by the student.

Students must pay the cost price of any materials for study, and a proportion of the cost of materials supplied for class work.

Advice to Students prior to Admission

Drawing and Mathematics are important and the student should have some general knowledge of History. Some experience in Carpentry or Model Making is useful.

Students should draw many different subjects and use a number of different media. They should not confine themselves to sketching buildings. Measured drawing of small subjects, such as doorways, is to be encouraged.

TOWN AND COUNTRY PLANNING

Short full-time and part-time Post-Graduate Diploma Courses, in preparation for the Final Examination of the Town Planning Institute, are proposed.

A full-time five year Diploma Course in Town Planning, leading to the Final Examination of the Town Planning Institute, is also envisaged.

ART

This department will prepare students for employment in artistic careers allied to commerce and industry.

A first year General Art course will be followed by specialized training in Commercial Art, Industrial Design and other Applied Arts, according to the student needs.

Excellent studio facilities are available for the following proposed instruction:-

First Year General Art Course

- Drawing
- Painting
- Lettering
- Perspective
- Modelling
- Principles of Design
- Introduction to the History of Art

The Second and Third Years will include:-

- Life Drawing
- Painting
- Modelling and Carving
- History of Art
- Design
- Art or Craft Techniques

} in specialist subject

A College Certificate of Proficiency will be awarded to students who successfully complete their course of study and examination.

DEPARTMENT OF ARTS

Head of Department: to be appointed

Qualified staff will be appointed as lecturers in English, Modern Languages, Geography and History.

Intermediate B.A. Course

This course, of two years' duration, will consist of tuition in English and any two other subjects selected from the following:-

Geography, History, Mathematics (Pure and Applied).
French may be taken as an additional subject.

Part-Time Courses

According to demand, part-time courses will be provided in selected subjects.

DEPARTMENT OF COMMERCE

Head of Department: William Rodgers, M.A., A.M.I.I.A.,
F. Comm.A., F.R. Econ. S.

Qualified staff will be appointed as lecturers in Accountancy, Administration, Economics and Law.

The Commerce Department will provide training to an advanced level in commerce and administration suitable for those desiring to prepare themselves for the more responsible posts in business and the public services.

Full-time and part-time courses as shown below will be provided up to degree and professional levels, and details are given also of short and non-vocational courses.

FULL-TIME COURSES

1. External degree of B.Sc. (Econ.) of London University

Five years will normally be required for the full course, but suitably qualified students may be exempted from the first year. The subjects of the first stage of the degree examination are Economics, Economic History, British Constitution and Geography.

2. Intermediate Examination for Company Secretaries

Two years will be required for this course intended to prepare students for the Intermediate Examinations of the Chartered Institute of Secretaries and of the Corporation of Secretaries, but suitably qualified students may proceed direct to the second year of the course. The subjects of the Intermediate Examination are Accountancy, English, Economics, Elements of Law, Company Law and Secretarial Practice. Upon successful completion, students may proceed to a part-time course for the Final Examination of the association concerned (See under Part-time Courses 3.)

3. General Commercial Course

This course, of two years' duration, will provide students direct from school with a suitable foundation which, after practical experience has been added, will prepare them for responsible junior positions in industry and commerce. The subjects of the course will include Accountancy, Economics, Economic History, Geography, English, Elements of Law, Secretarial Practice.

4. Surveyors Course (General Branches)

This course, of one year's duration, will prepare students in the subjects needed for the First Examination of the Royal Institution of Chartered Surveyors in all branches other than Land Surveying and Mining Surveying. Upon successful completion, students may proceed to the Part-time course in preparation for the Intermediate Examination.

5. Course for Land Surveyors

This course, of one year's duration, will prepare students for the First Examination of the Royal Institution of Chartered Surveyors in Land Surveying. Upon successful completion, students may proceed to the Part-time course in preparation for the Intermediate Examination.

INTERMITTENT AND PART-TIME COURSES (DAY AND EVENING)

Intermittent courses will be arranged in which full-time tuition will be provided at the College for two periods of two to three weeks each, one towards the beginning and the other towards the end of each session. Between these periods, tuition by correspondence will be provided by lecturers in the Department who have already established personal contacts with their students. This tuition will consist of advice on reading, cyclostyled lessons and the correction of written work.

There will also be provided Part-time Day courses meeting on one or two days weekly throughout the session, and Part-time Evening courses meeting on three or four evenings weekly.

1. Accountants

Courses will be provided for students intending to take the Intermediate examinations of the Incorporated and the Certified Accountants or the Final Examination of the latter association. Students must be able to satisfy the entrance requirements of the professional body concerned.

2. Bankers

Courses will be provided for students preparing for Parts I and II of the Institute of Bankers Diploma Examination.

3. Company Secretaries

Courses will be provided for students preparing for the Intermediate and Final Examinations of the Chartered Institution of Secretaries and of the Corporation of Secretaries. Students must be able to satisfy the entrance requirements of the professional body concerned.

PART-TIME COURSES (DAY AND EVENING)

4. Cost Accountants

Courses will be provided for students intending to take the Intermediate Examination of the Institute of Cost & Works Accountants. Students must be able to satisfy the entrance requirements of the Institute.

5. Industrial Administration

Courses will be provided for students intending to take the Common Intermediate Examination in Management Studies of the Institute of Industrial Administration and other professional organizations. Students must be not less than 21 years of age and should occupy a position in industry or commerce of at least junior management level.

PART-TIME DAY COURSES

6. Surveyors

Courses will be provided for students who intend to take the Intermediate Examination of the Royal Institution of Chartered Surveyors in the following sections:-

Land Agency, Valuation, Land Surveying, Building Surveying, Quantity Surveying. Students should have passed or received exemption from the First Examination of the Institution.

7. Transport

Courses will be provided for students intending to take the Graduateship examination of the Institute of Transport.

SHORT COURSES

According to the demand expressed from interested individuals and organizations, a number of short courses, on the lines of those indicated below, will be provided during the session.

1. Branch Managers

Full time courses of four weeks' duration suitable for branch or depot managers of trading organizations will be provided to include such subjects as Branch Accounts, Stock Control, Personnel Management, Report Writing.

2. Industrial Administration

Courses of lectures given by specialists on particular problems of management and allowing for discussion will be provided for those holding senior positions in industry and commerce, and will be held on one afternoon or evening each week for ten weeks.

3. Management Accounting

Courses of two weeks' full-time tuition, dealing with the latest techniques of financial control, will be provided for accountants holding responsible positions in industry or commerce.

4. Office Supervision

Courses of three weeks' full-time tuition will be provided for office managers and supervisors to deal with such subjects as Office Mechanization, Clerical Work Simplification, Staff Training, Form Design, etc.

5. Organization and Methods

Full-time courses of four weeks' duration will be provided for government officers at intermediate levels, in which tuition will be given on the techniques of "O. & M." so that they will be suitably equipped to undertake surveys in their own departments.

NON-VOCATIONAL COURSES

Provided there is sufficient demand, evening courses will be provided on such topics of general interest as Economic Problems, Industrial Relations, Development of East Africa, etc.

DEPARTMENT OF DOMESTIC SCIENCE

Lecturer in Charge: Mrs. B. Frost, L.U.T. Cert. (Dom Sci.).

The main function of the department will be to train students to become teachers of Domestic Subjects. It is intended initially to provide a three year training course, with a qualifying Diploma, up to a standard similar to that required in the United Kingdom.

The main subjects to be included in the course will be as follows:-

First Year

- English
- Hygiene (to include anatomy and physiology)
- Cookery (plain class)
- Laundrywork
- Housewifery
- Needlework (ordinary)
- Applied Psychology
- Speech Training
- Teaching methods (observation and practice in general subjects if possible)

Second Year

- Cookery (plain class)
- Laundrywork
- Needlework
- Household Management
- Applied Science and Hygiene
- English (to include an examination)
- Applied Psychology
- Teaching methods and practice in Domestic Subjects

Third Year

As second year. This year may include a more advanced study of one branch of the subject, e.g. Cookery or Needlework.

Other Courses

Facilities for other courses will be made available when these are justified by experience and demand.

DEPARTMENT OF ENGINEERING

Head of Department: J. E. Taylor, M.Sc.Tech., A.M.I. Mech.E.
Assistant Lecturer: L. Kemp.. G.I.Mech.E.

Other qualified staff will be appointed to give instruction in the Engineering Department, which is intended to provide courses in Civil, Mechanical and Electrical Engineering and in Workshop Technology. These courses are designed primarily to give sound basic scientific and practical training, which will enable successful students to fill the many positions in industry, public and Government services, which the development of East Africa demands.

It is hoped that successful completion of these courses will lead ultimately to Corporate Membership of the main Engineering Institutions and to degrees in Engineering.

Great importance will be attached to the schemes of workshop, laboratory, and other practical work which will form prominent features of the courses.

In addition, full-time students will be expected to spend a substantial portion of the long vacations engaged in practical work in industry.

The Laboratories will be well equipped for experimental work and testing in the subjects of heat-engines, hydraulics, applied mechanics, properties and strength of materials, theory of machines, structures, surveying and levelling, soil-mechanics, electrical and telecommunications engineering.

The Workshops of the Department will be provided with modern plant and equipment for the practical and theoretical study of machine-tools, manual techniques, forging, sheet-metal, gas and electric-welding technologies, heat-treatment and metallurgy, automobile engineering, timber technology, metrology and gauging.

There will also be a drawing-office equipped in accordance with present day practice.

Students will be expected to provide themselves with suitable overalls for all workshop and certain laboratory classes, together with drawing instruments, slide rules and other equipment as may be required.

The following courses will be offered initially:—

FIRST DIPLOMA COURSES in Civil, Mechanical and Electrical Engineering. These are three year full-time courses in which the subjects will be as follows :—

First Year common to all entrants :—

Mathematics
Physics (Light and Sound).
Chemistry
Engineering Drawing, Sketching and Graphics.
Applied Mechanics
Applied Heat
Electrotechnology
Workshop Technology and Practice
English

Second Year — as first year, except that Civil Engineering students will substitute elementary Surveying, Levelling and Structures, and Electrical students will substitute additional electrical work, for the subject of Workshop Technology and Practice.

Third Year — as second year.

These courses, which will be of “Ordinary National Diploma” standard, will meet the needs of all engineering students who may wish to specialize at the higher levels.

Successful completion of one of these courses will qualify for entry to an appropriate higher course and may enable a student to sit for the Joint Part I examinations of the Engineering Institutions.

OTHER FULL-TIME COURSES — such as those of the “works-based” sandwich type, will be introduced as experience and demand justifies.

PART-TIME DAY AND/OR EVENING COURSES — to meet the needs of those who for business or financial reasons are unable to undertake a full-time course, will be arranged, when justified by the demand.

DEPARTMENT OF SCIENCE

Head of Department: W. T. Trewartha, B.Sc., F.R.A.S.

Qualified staff will be appointed to give instruction in the Science Department, which will aim to provide students with a broad background of scientific knowledge and training, so that they may successfully pursue further studies, either in the various branches of engineering or in pure science or in applied science.

Initiative and resourcefulness will be encouraged. To this end great attention will be paid to the practical and experimental aspects of the study of science. The laboratories will be well equipped with a wide variety of apparatus.

COURSES

1. One-Year Preliminary Course

To assist those students who have secured the minimum entry qualification to the College, but who have not studied Physics and Chemistry sufficiently to enable them to embark successfully upon work of intermediate standard, it is proposed to offer, during the initial stages of the College, a one-year preliminary course designed to fill this gap.

Students who fail to satisfy the Head of Department that they have the requisite knowledge of Physics and Chemistry needed for a successful study of the intermediate courses will be required to complete this preliminary course before commencing their intermediate studies.

It is expected that a number of those students who have passed in General Science at their School Certificate examinations will be required to take this preliminary course.

2. Two-Year Courses of Intermediate Standard

The department will offer courses in the following subjects up to the standards of the external Intermediate Examinations of London University :—

Physics. Mechanics and general properties of matter; heat; meteorological physics; light; sound; magnetism and electricity.

Chemistry. General inorganic chemistry of the metals and non-metals; physical chemistry; elementary organic chemistry as the chemistry of various characteristic groups.