

Bachelor of Engineering Technology in Industrial Engineering (BEng Tech Industrial Engineering)

Location: Steve Biko Campus (S4 Level 0)

Description of the Programme

The purpose of the Bachelor of Engineering Technology in Industrial Engineering (BEngTech Industrial Engineering) is to equip the students with the necessary knowledge, understanding, skills and abilities in the field of industrial engineering. Graduates from this program would be able to register with the Engineering Council of South Africa as a candidate engineering technologist. The duration of this programme is 3 years full time study. The programme will also prepare students for further study at the post graduate levels.

Why Industrial Engineering?

Industrial engineering is a discipline within the field of engineering that is focused on determining the most effective ways for an organization to use the basic factors of production namely people, machines, materials, information and energy to make or to process a product. Industrial Engineering, perhaps more than any other engineering discipline, is focused on the human and organizational aspects when developing or analysing a system.

Who is an Industrial Engineering Technologist?

Industrial engineering technologists plan, design, implement and manage integrated systems that assure performance, reliability, maintainability and cost feasibility.

They are people who are able to draw upon the specialized knowledge and skills from various areas within the engineering, management, sciences and commerce domains in order to find optimal solutions to practical problems.

Career Opportunities

Industrial engineering technologists are employed over a vast array of industries operating within various sectors of the economy. Examples of such include: the manufacturing sector, retail sector, banking sector etc. Industrial engineering technologists add value to any organization that they join and as such are much sought after.

Personal Qualities Required

The individual must be:

- Self-motivated, structured and organized.
- A critical thinker with active listening skills and a good verbal communicator.
- able to function well within a team environment i.e. being a team member or being a team leader
- Able to understand and solve complex problems.
- Responsible and accountable.

Entry Requirements

School leaving or TVET applicants who wish to enrol for the programme must apply through the CAO system by no later than 30 September of the previous year. The number of students enrolled in the programme is determined by the University and departmental growth policies and a ranking system is used to determine the number of candidates as required.

Compulsory Subjects	NSC Rating	SC		NCV Level 4
		HG	SC	
English (home) OR English (1st additional)	4	E	C	60%
Mathematics	4	E	C	70%
Physical Science	4	E	C	70%
Life Orientation				60%
Two other relevant NCV vocational subjects				70%

The subject NSC Mathematical Literacy will not be accepted as a substitute for the subject NSC Mathematics.

The exit certificate of the candidate must qualify the candidate for degree study at an institution of higher learning.

Applicants with a NSC will be ranked according to the sum of their scores for Mathematics and Physical Science, subject to a minimum combined score of 120%.

Prospective applicants may also present an NQF level 6 Diploma in Engineering for entry into the degree programme. A possibility of transfer of credits for cognitive previous studies would be considered dependent on the discipline and nature of the Diploma being presented.\

National Technical Certificate N4

Applicants that qualify for degree study at an institution of higher learning, but do not meet the departmental mathematics and/or physics requirements, may present the following N4 subjects, for consideration for entry to the BET programme.

Mathematics and Engineering Science, plus two of:

- Mechanotechnics
- Engineering Drawing
- Electrotechnics

The above are all to be passed, in the same sitting, with a minimum of 50%. Students will then be ranked, alongside the NSC students, according to the sum of their marks for N4 Mathematics and Engineering Science, subject to a minimum combined score of 120%.

Admission Requirement based upon Work Experience, Age and Maturity

For admission to entry level DEGREE studies:

A person may, subject to such requirements as the Senate may determine, be admitted if such a person is in possession of a National Senior Certificate, Senior Certificate or an equivalent certificate, but lacks the minimum requirements for admission to the degree provided that:

- The person shall have reached the age of 23 in the first year of registration and shall have at least: three years' appropriate work experience; and/or capacity for the proposed instructional programme, which shall be assessed by a Senate-approved admission assessment comprising of a DUT Standardised Assessment Test for Access and Placement (SATAP), Academic Literacies (AL) & English for Academic Purposes (EAP) (2,5 hours) and/or an appropriate subject or programme specific written assessment designed and marked by the relevant Department; and the person has obtained
- A conditional certificate of exemption from the Matriculation Board (when in possession of the Senior Certificate (SC)); OR has met
- The requirements for Senate discretionary admission (when in possession of the NSC or equivalent), where Senate is satisfied the applicant has shown sufficient academic ability to ensure success, and that the person's standard of communication skills, and/or work experience are such that the person, in the opinion of the Senate, should be able to complete the proposed instructional programme successfully.
- The person's application for admission in terms of with work experience, age and maturity is approved prior to registration.

Applicants intending to gain admission through work experience, age and maturity must submit their applications at least four months before commencement of the academic year.

NOTE: This department only considers first and Second choice CAO applicants.

PLEASE NOTE: Subjects, Subject placement and Subject Codes may change arising from operational requirements. Kindly refer to the current departmental handbook for further information.

NB: For semester programmes there would be a single registration for semester 1 and semester 2 at the beginning of each academic year.

First Year Curriculum Semester One

Engineering Mathematics IA
Engineering Physics IA
Statistics I
Industrial Drawing and CAD
Cornerstone101
Technical Literacy

Subject Code

EMTA101
EPHA101
STST101
ICADI01
CSTN101
TLCT101

Semester Two

Engineering Mathematics 1B
Engineering Physics 1B
Financial Accounting for Engineers
Sociology
Computing and IT
Electrical Principles I

EMTB101
EPHB101
FAEN101
SCWK101
CMIN101
ELEP101

Second Year Curriculum

Semester Three

Engineering Mathematics 2A
Strengths of Materials I
Mechanics of Machines I
Computer Programming and IT
Management Accounting for Engineers
Industrial Design I

EMTA201
STMT102
MCHM102
CPRI101
MACE101
IDES101

Semester Four

Engineering Mathematics 2B
Engineering Work Systems 1
Production Engineering I
Information System Design
Manufacturing Engineering I
Industrial Design 2

EMTB201
EWSY101
PENG101
ISYD101
MNFE101
IDES201

Third Year Curriculum

Semester Five

Facilities Planning
Engineering Work Systems 2
Production Engineering 2
Operations Research
Project Management
Design Project Part I

FCLP101
EWSY201
PENG201
OPRS101
PMAN102
DPJT111

Semester Six

Engineering Work Systems 3
Production Engineering 3
Simulation Modelling
Principles of Management
Quality Engineering
Design Project Part 2

EWSY301
PENG301
SMMD101
PMGM102
QLTE101
DPJT121

Closing date for applications: 30 September 2019 **CAO Code:** DU-D-BIE

For Further Information

Department of Industrial Engineering
Durban University of Technology
P.O. Box 1334
Durban 4000
Tel: 031- 3732445
Fax: 031- 3732015
Email: industrialadmin@dut.ac.za
Web:
http://www.dut.ac.za/faculty/engineering/industrial_engineering/

Application Forms

Contact the **Central Applications Office (CAO)**
Address letters to:
Central Applications Office
Private Bag X06
Dalbridge 4014
Tel: (031) 2684444
Fax: (031) 2684422
Apply Online: <http://www.cao.ac.za>



CAREER INFORMATION

BACHELOR OF ENGINEERING TECHNOLOGY IN

**INDUSTRIAL
ENGINEERING**

1 JANUARY- 31 DECEMBER 2020

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**FACULTY OF
ENGINEERING
& THE BUILT
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**DEPARTMENT OF
INDUSTRIAL
ENGINEERING**

2020

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