



CAREER INFORMATION 2021

BACHELOR OF ENGINEERING TECHNOLOGY IN INDUSTRIAL ENGINEERING



FACULTY OF
ENGINEERING
& THE BUILT
ENVIRONMENT

DEPARTMENT OF
INDUSTRIAL
ENGINEERING

01 JAN - 31 DEC 2021



NQF 7

SAQA ID: 99639

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 November 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.

Entry Requirements BET (Industrial Engineering)

NATIONAL SENIOR CERTIFICATE (NSC) (01 January 2009)		SENIOR CERTIFICATE (SC) (PRE 2009)			NATIONAL CERTIFICATE (VOCATIONAL) (NCV)	
NSC DEGREE ENTRY		SENIOR CERTIFICATE (SC)			NATIONAL CERTIFICATE VOCATIONAL (NCV) – LEVEL 4	
Compulsory Subjects	NSC Rating Code	Compulsory Subjects	HG	SG	Compulsory Subjects	Mark
English	4	English	E	C	English	60%
					Life Orientation	60%
Mathematics	4	Mathematics	E	C	Mathematics	70%

Physical Science	4	Physical Science	E	C	Physical Science	70%
					In addition, two other additional vocational subjects at a minimum of 70%.	
NB:						
<ol style="list-style-type: none"> 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. This department only considers first and Second choice CAO applicants. 						
Other:						
Applicants, that qualify for degree study (Bachelor's Pass) at an institution of higher learning, but do not meet the departmental mathematics and/or physical science requirements, may present the following N4 subjects, for consideration for entry to the BET programme:						
<ul style="list-style-type: none"> Mathematics and Engineering Science, plus any two of the following: Mechanotechnics Engineering Drawing Electrotechnics 						
The above subjects must be passed with a minimum of 50% and all in the same sitting. Students will then be considered 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.						

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

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.

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 is a single registration for semester 1 and semester 2 at the beginning of each academic year.

First Year Curriculum

Name of Module	Subject Code	HEQSF Level	SAQA Credits
Semester 1			
Engineering Mathematics IA	EMTA101	5	12
Engineering Physics IA	EPHA101	5	12
Statistics I	STST101	6	12
Industrial Drawing and CAD	ICAD101	6	16
Cornerstone101	CSTN101	5	12

Technical Literacy	TLCT101	6	8
TOTAL			
Semester 2			
Engineering Mathematics 1B	EMTB101	5	12
Engineering Physics 1B	EPHB101	5	12
Financial Accounting for Engineers	FAEN101	6	8
Sociology	SCWK101	6	8
Computing and IT	CMIN101	6	8
Electrical Principles 1	ELEP101	5	12
TOTAL CREDITS SEMESTER 1&2			132

Second Year Curriculum

Semester 3			
Engineering Mathematics 2A	EMTA201	6	12
Strengths of Materials 1	STMT102	5	12
Mechanics of Machines 1	MCHM102	6	12
Computer Programming and IT	CPRI101	6	8
Management Accounting for Engineers	MACE101	6	8
Industrial Design 1	IDES101	5	16
Semester 4			
Engineering Mathematics 2B	EMTB201	6	12
Engineering Work Systems 1	EWSY101	5	12
Production Engineering 1	PENG101 I	5	12
Information System Design	ISYD101	7	16
Manufacturing Engineering 1	MNFE101	7	8
Industrial Design 2	IDES201	6	12
TOTAL CREDITS SEMESTER 3&4			140

Third Year Curriculum

Semester 5			
Facilities Planning	FCLP101	7	12
Engineering Work Systems 2	EWSY201	6	12
Production Engineering 2	PENG201	6	12
Operations Research	OPRS101	7	12
Project Management	PMAN102	6	8
Design Project Part 1	DPJT111	7	12
Semester 6			
Engineering Work Systems 3	EWSY301	7	16
Production Engineering 3	PENG301	7	16
Simulation Modelling	SMMD101	7	16
Principles of Management	PMGM102	6	8
Quality Engineering	QLTE101	7	12
Design Project Part 2	DPJT121	7	12
TOTAL CREDITS SEMESTER 5&6			148

NB: The course structure and requisite modules are subject to alteration.

Application

Applicants who wish to enrol for the programme must apply through the CAO system by no later than 30 November of the previous year.

Application Forms

Contact the **Central Applications Office (CAO)**

Address letters to:

Central Applications Office
Private Bag X06
Dalbride,

4014

Tel: (031) 2684444

Fax: (031) 2684422

OR

Apply Online: <http://www.cao.za>

CAO Code: DU-D-BIE

Closing date for applications: 30 November 2020

For Further Information:

Contact the Department of Department of Industrial Engineering

Steve Biko Campus (S4 Level 0)

Durban University of Technology

P O Box 1334

DURBAN, 4000

Tel: (031) 3732445

Email: industrialadmin@dut.ac.za

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