CIVIL ENGINEERING

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKNIKI YEZOBUCHWEPHESHE

FACULTY OF ENGINEERING & THE BUILT ENVIRONMENT

20 HAND 25 BOOK

HANDBOOK FOR 2025

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

DEPARTMENT OF CIVIL ENGINEERING (MIDLANDS)

Programme handbook for:

DIPLOMA IN ENGINEERING TECHNOLOGY IN CIVIL ENGINEERING
DIPLOMA IN THE BUILT ENVIRONMENT IN CONSTRUCTION STUDIES

WHAT IS A UNIVERSITY OF TECHNOLOGY?

A university of technology is characterised by being research informed rather than research driven where the focus is on strategic and applied research that can be translated into professional practice. Furthermore, research output is commercialized thus providing a source of income for the institution. Learning programmes, in which the emphasis on technological capability is as important as cognitive skills, are developed around graduate profiles as defined by industry and profession.

DEPARTMENTAL VISION AND MISSION

Vision:

To be a quality driven department that provides a well-rounded, professional education that ensures that graduates are innovative and have a competitive edge.

Mission:

As a progressive department, our mission is to contribute innovatively to the socio-economic development of South Africa by:

1. Equipping our students with specialist knowledge in the field of civil engineering and construction.
2. Producing well-rounded graduates who are attuned to the needs of the profession.
3. Generating, integrating, and applying knowledge to stimulate socio-economic development.
4. Partnering with stakeholders in sustainable development: governmental organisations, non-government organisations, state owned enterprises, professional bodies and industry, to solve engineering problems timeously.
5. Acting as an incubator for advanced study in clearly defined areas of strength.
6. Being student-centred and quality driven.
7. Providing an enabling environment for continued staff development.

SUMMARY OF PROGRAMMES

The purpose of the Diploma in Civil Engineering is to empower civil engineering technicians who will meet the criteria for registration as a candidate professional technician by the Engineering Council of South Africa (ECSA), and who will display competence as part of the engineering team in the execution of technical tasks under remote supervision by using and applying their knowledge in independent judgement in the identification and solution of civil engineering problems. To be leaders in the engineering fraternity.

The purpose of the Diploma in the Built Environment in Construction Studies is to empower students to become skilled construction managers or quantity surveyors. The programme provides essential knowledge, skills, and practical experience, preparing graduates for careers in construction management or quantity surveying. Graduates will be equipped to contribute effectively to the construction industry and national development, with the competence to work independently and responsibly.

GENERAL INFORMATION

Diploma in Engineering Technology in Civil Engineering:

Civil Engineering is one of the most important fields of technology, and the Department of Civil Engineering has developed a mission statement in line with the demands of the country. To assist with wealth creation and upliftment, the department strives to be amongst the best with regards to education, training, research and development. To that end, we have nurtured expertise in civil engineering and its sub-disciplines (i.e. structures, transportation, and water), and our efforts are recognised both locally and internationally. More importantly, our diplomates and graduates are well received and respected by industry.

To educate students effectively, we expect that students who enter the department take their studies seriously. Those who fail repeatedly congest classes and prevent others from taking up studies. Thus, the student will need to be motivated and diligent in his/her efforts.

The diploma will equip the student with well-defined skills necessary to excel as a technician. Further studies will help the student to develop expertise in these fields and rise to the top of the profession. The result will depend on the student.

The Dip Eng Tech Civil qualification offered at Indumiso campus of Durban University of Technology (DUT) provides students with a sound knowledge base in Civil Engineering and the ability to apply the knowledge and skills to progress in Civil Engineering career while equipping the graduates of the qualification to undertake more specialised and intensive learning in relevant field of Civil Engineering. The qualification has a strong vocational and career focus. The graduates of this qualification are more engaged in specific niche in labour market (construction industry and its allied).

Moreover, the programme builds the necessary knowledge, understanding and skills required for further learning towards becoming a professional Civil Engineering Technician. This qualification provides its graduates with:

1) The preparation for careers in engineering and areas that potentially benefit from engineering skills, for achieving technical proficiency and competency to contribute to the economy and national development.
2) The educational requirement towards registration as a Professional Engineering Technician with the Engineering Council of South Africa as well as to allow its graduate to pursue careers in engineering and related fields.
3) A thorough grounding in mathematics, natural sciences, engineering sciences, engineering modelling, engineering design and the ability to enable applications in fields of emerging knowledge together with an appreciation for our world and society.

4) An entry requirement into Bachelor of Engineering Technology qualification which articulates to Honours and subsequent Masters and Doctoral Programmes.

The design and structure of the programme enjoy the autonomy of the University and the professional body (ECSA). The programme design and structure follow a well-defined standardised template in accordance with the ECSA Unit Standard E-08-PN Rev 4.

RATIONALE

The rationale of this qualification is to develop the necessary knowledge, understanding and skills required for a student's further learning towards becoming a competent practicing Civil Engineering Technician. It is intended to subsequently empower graduates to demonstrate that they can apply their acquired knowledge, understanding, skills, attitudes and values in the work environment.

The programme is designed to add value to the qualifying students in terms of enrichment of the person, status and recognition. Consultation with industry through the current Departmental Advisory Board structure indicated a strong need for Diploma qualified personnel in the field of Civil Engineering within the local region. There is demand for civil engineering technicians, for example, local municipalities, UMngeni-uThukela Water, Department of Transport, South African National Roads Agency Limited, and private sector consulting and construction companies. The department intends to meet the demand by producing graduates through this programme.

Diploma in the Built Environment in Construction Studies:

Construction Management and Quantity Surveying is one of the most important fields in the construction industry, and the Department of Construction Studies has developed a mission statement in line with the demands of the country. To assist with wealth creation and upliftment, the department strives to be amongst the best with regards to education, training, research and development. To that end, we have nurtured expertise in the areas of materials, design and manufacturing, and our R&D efforts are recognised both locally and internationally. More importantly, our diplomates and graduates are well received and respected by industry.

To educate students effectively, we expect that students who enter the department take their studies seriously. Those who fail repeatedly congest classes and prevent others from taking up studies. Thus, the student will need to be motivated and diligent in his/her efforts.

The diploma will equip the student with the skills necessary to excel as a graduate, and further studies will help the student to develop expertise in these fields and rise to the top of the profession. The result will depend on the student.

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IMPORTANT NOTICES

The departmental rules in this handbook must be read in conjunction with the Durban University of Technology's General Rules contained in the current General Handbook for Students.

Your registration is in accordance with all the current rules of the Institution. If, for whatever reason, you do not register consecutively for every year/semester of your programme, your existing registration contract with the Institution will cease. Your re-registration anytime thereafter will be at the discretion of the Institution and, if permitted, will be in accordance with the rules applicable at that time.

1. CONTACT DETAILS

All departmental queries to:

Admin Assistant:	Ms. NS. Mkhize (BTech: Office Management and Technology
Tel No:	033 845 9000 / 031 373 3141
Email:	NonkululekoM2@dut.ac.za
Location of Department:	Block L, Indumiso Campus, 23 FJ Sithole Road, Imbali, Pietermaritzburg

Admin Assistant:	Ms. S Thusi (BTech: Business Information Management)
Tel No:	033 845 9000/ 031 373 3141
Email:	SamukelisiweT@dut.ac.za
Location of Department:	Block L, Indumiso Campus, 23 FJ Sithole Road, Imbali, Pietermaritzburg

All Faculty queries to:

Faculty officer:	Mrs N Singh
Tel No:	031 373 2718
Email:	SinghN@dut.ac.za
Location of Faculty office:	Steve Biko Campus, S4 Level 3 41/43 ML Sultan Road Greyville, Durban 4001

All Administrative queries to:

Admin officer:	Ms N. Ndlovu
Tel No:	033 837 8818
Email:	NelisiweN2@dut.ac.za
Location of Faculty office:	Block D, Riverside Campus, 19 Aberfeldy Road, Scottville, Pietermaritzburg

Deputy Dean (Acting):	Prof K Moloi
Tel No:	031 373 2762
Email:	KatlehoM@dut.ac.za
Location of Deputy Dean's office:	Steve Biko Campus, S6 Level 5 41/43 ML Sultan Road Greyville, Durban 4001

Executive Dean (Acting):	Prof S Rathilal
Tel No:	031 373 2762
Email:	RathilalS@dut.ac.za
Location of Executive Dean's office:	Steve Biko Campus, S6 Level 5 41/43 ML Sultan Road Greyville, Durban 4001

Dean's Secretary:	Ms. N Matola
Tel No:	031 373 2762
Email:	NoluthandoM@dut.ac.za
Location of Executive Dean's Secretary	:Steve Biko Campus, S6 Level 5 41/43 ML Sultan Road Greyville, Durban 4001

2. STAFFING

Head of Department	Dr Z. Ngubane DEng Civil Eng, Pr Sci Nat (Acting)
Senior Lecturer	Dr. J. Ikotun PhD Civil Eng
Lecturers	
	Mr S. Hay MTech Civil Eng, Pr Tech Eng
	Mr S. Moonsamy MSc Civil Eng
	Mr. J. Adedeji MTech: Civil Eng
	Mr. M. Mkhize MEng Civil Eng, Pr Tech Eng, Pr CPM, PMP
	Ms. O. Nakin MEng Civil Eng
	Mr. A. Sarjoo MEng Civil Eng, Pr Tech Eng
	Mr. D. De Kock MSc: Enviro and Dev.
	Mr. N. Jele Masters MSc, Pr Sci Nat
	Ms. T. Nkosi, MTech
	Dr. C. Okorafor Phd Civil, PrCPM
Senior Technician	Mr. N. Hlalukane BTech: Civil Eng (Transport)
Technicians	Mr. E. Tchakubuta BTech: Civil Eng (Urban)
	Mr. S. Nzama BTech: Civil Eng (Urban)
	Mrs T. Marule BTech: Civil Eng (Urban)
	Mr. T. Maluleke BTech: Civil Eng (Structural)
	Mr Z. Balogi BTech: Civil Eng (Urban)
	Mr. M. Lutyeku BTech: Information Tech.

3. PROGRAMMES OFFERED BY THE DEPARTMENT

Programmes are offered in this Department which, upon successful completion, lead to the award of the following qualifications:

Table 1: Programmes offered by Department

Qualification	SAQA NLRD Number
Diploma in Engineering Technology: Civil Engineering	99026
Diploma in the Built Environment in Construction Studies	112383
M. Eng	96827
D. Eng	96812

4. PROGRAMME PURPOSE

The purpose of the Diploma in Engineering Technology in Civil Engineering qualification is to provide students with the knowledge and understanding of civil engineering and equip them with skills necessary which may enable them for registration as Engineering Technicians with the Engineering Council of South Africa (ECSA).
A qualified student will be able to:

- Apply engineering principles to systematically diagnose and solve well-defined civil engineering problems in familiar and unfamiliar contexts.

- Apply knowledge of Mathematics, Natural Science and Engineering Sciences to defined and applied engineering procedures, processes, systems and methodologies to solve well-defined Civil Engineering problems in familiar and unfamiliar contexts.

- Perform procedural and non-procedural design of well-defined components, systems, works, products or processes to meet desired needs normally within applicable standards, codes of practice and legislation.

- Conduct investigations of well-defined problems through locating, searching and selecting relevant data from codes, databases and literature, designing and conducting experiments, analysing and interpreting results to provide valid conclusions.

- Use appropriate techniques, resources, and modern engineering tools, including Information Technology, prediction and modelling, for the solution of well-defined

engineering problems, with an understanding of the limitations, restrictions, premises, assumptions and constraints.

- Communicate effectively, both orally and in writing, with engineering audiences and the affected parties.

The purpose of the Diploma in the Built Environment in Construction Studies is for students to assimilate the necessary knowledge, understanding, abilities and skills required for further learning towards becoming a competent practicing construction manager or quantity surveyor. This combined with a period of post qualification mentored work experience will enable them to become competent practicing technician, able to apply judgment and work with minimal supervision and responsibly.

To provide students with a sound knowledge base which emphasizes general principles and application in a particular field or discipline, and the ability to apply their knowledge and skills to career or professional contexts, while equipping them to undertake more specialised and intensive learning. Programmes leading to this qualification tend to have a strong professional or career focus and holders of this qualification are normally prepared to enter a specific niche in the labour market.

To provide students:

i. with the preparation required for careers in construction management and/or quantity surveying,
ii. the ability to contribute to the economy and national development, and
iii. Entry to NQF level 6 programmes, e.g., bachelors' programmes must be a completed Diploma

To contribute to the critical mass of construction industry professionals educated specifically for the world of work, and who also play a pivotal role in the infrastructure development of our country.

5. MINIMUM ADMISSION REQUIREMENTS FOR CIVIL ENGINEERING

In addition to the relevant General Rules pertaining to Registration (e.g. Rules G3, G4, G5, G6, G7, G8, G9 & G10),
School leaving 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 applicants as required.

The minimum admission requirement is the National Senior Certificate, Senior Certificate or the National Certificate (Vocational) with appropriate module combinations and levels of achievement as defined in the Government Gazette, Vol. 751, No. 32131 of 11 July 2008, and in the Government Gazette, Vol. 533, No. 32743, November 2009.

In addition to the above, the following is required for admission to the programme:

Table 2: DICVE1 Entrance Requirements

National Senior Certificate (NSC)		**National Certificate Vocational (NCV)**		**Senior Certificate (SC)**		
Compulsory Subjects	**Rating**	**Compulsory Subjects**	**Mark**	**Compulsory Subjects**	**HG**	**SG**
Mathematics	4	English	60 %	Mathematics	E	C
Physical Science	4	Mathematics	60 %	Science	E	C
OR		Life Orientation	60%	English	E	C
Technical Mathematics	5	Physical Science	60 %			
Technical Science	5	**AND**				
AND		Two other relevant NCV vocational subjects	60%			
English (Primary or 1st Additional)	4					
Three more 20 credit NSC subjects	4					

Notes:

I. The module NSC Mathematical Literacy will not be accepted as a substitute for the module NSC Mathematics.
II. The exit certificate of the candidate must qualify the candidate for diploma study at an institution of higher learning.
III. Applicants will be ranked according to the sum of their scores for Mathematics and Physical Science subject to a minimum total score of 100 and with a minimum rating of 4 for Mathematics and 4 for Physical Science.
IV. No points are allocated for the subject "Life Orientation".

Other:

Applicants that do not meet the requirements above may qualify for admission if they meet the following criteria:

- They hold a cognate National Technical Certificate N4 with passes at 50% in four (4) relevant subjects including Mathematics and Engineering Science, or cognate SAQA NQF Level 4 qualification, as well as compliance with the English language requirements as stated in the General Rules. Credit may be

given for subjects passed, in accordance with the Credit Accumulation and Transfer Policy.

- They hold a cognate Higher Certificate - The possibility of transfer of credits is considered, dependent upon the Higher Certificate presented.

- In the case of a Higher Certificate in Applied Sciences awarded by the Durban University of Technology a student may be given credits for the following modules:

    - Engineering Mathematics 1A
    - Engineering Physics 1A
    - Technical Literacy
    - Cornerstone 101

- They hold a cognate National N Diploma - Credit transfer is possible.

6. MINIMUM ADMISSION REQUIREMENTS FOR CONSTRUCTION STUDIES

This programme only has one intake per annum, which is usually in January.

In addition to the relevant General Rules pertaining to Registration (e.g., Rules G3, G4, G5, G6, G7, G8, G9 & G10); The minimum entry requirement is the National Senior Certificate or the National Certificate (Vocational) with appropriate subject combinations and levels of achievement as defined in the Government Gazette, Vol 751, No 32131 of 11 July 2008, and in the Government Gazette, Vol. 533, No. 32743, November 2009. In addition, the minimum admission requirements, rule G7, is stipulated in the General Rules Handbook.

Further to the above, the following are required for admission into Diploma of the Built Environment (Construction Studies):

NSC, NCV, SC:

Table 3: DIBES1 Entrance Requirements

National Senior Certificate (NSC)		National Certificate Vocational (NCV)		Senior Certificate (SC)		
Compulsory Subjects	**Rating**	**Compulsory Subjects**	**Mark**	**Compulsory Subjects**	**HG**	**SG**
Mathematics	4	English	60 %	Mathematics	E	C
Physical Science	4	Mathematics	60 %	Science	E	C
OR		Life Orientation	60%	English	E	C
Technical Mathematics	5	Physical Science	60 %			
Technical Science	5	**AND**				
AND		Two other relevant NCV vocational subjects	60%			
English (Primary or 1st Additional)	4					
Three more 20 credit NSC subjects	4					

Notes:

I. The module NSC Mathematical Literacy will not be accepted as a substitute for the module NSC Mathematics.
II. The exit certificate of the candidate must qualify the candidate for diploma study at an institution of higher learning.
III. Applicants will be ranked according to the sum of their scores for Mathematics and Physical Science subject to a minimum total score of 100 and with a minimum rating of 4 for Mathematics and 4 for Physical Science.
IV. No points are allocated for the subject "Life Orientation".

Other:
Applicants that do not meet the requirements above may qualify for admission if they meet the following criteria:

- They hold a cognate SAQA NQF Level 4 qualification (N4) with minimum passes at 60% (in a maximum of two sittings):
  - Mathematics and Engineering Science, plus:
  - Building and Structural Construction
  - Building and Structural Surveying
  - as well as compliance with the English language requirements as stated in the rules above.
  - Credit may be given for subjects passed, in accordance with the Credit Accumulation and Transfer Policy.
  - Students will then be ranked, alongside the NSC students, according to the sum of their marks for N4.

- They hold a cognate Higher Certificate - The possibility of transfer of credits is considered, dependent upon the Higher Certificate presented.

- In the case of a Higher Certificate in Applied Sciences awarded by the Durban University of Technology a student may be given credits for the following modules:

  - Engineering Mathematics 1A
  - Engineering Physics 1A
  - Technical Literacy
  - Cornerstone 101

- They hold a cognate National N Diploma - Credit transfer is possible.

7. PROGRAMME INFORMATION AND RULES

The departmental rules in this handbook must be read in conjunction with the Durban University of Technology's General Rules contained in the current General Handbook for Students. Registration is in accordance with all current rules of the Institution. If, for whatever reason, a student does not register consecutively for every year/semester of your programme, their existing registration contract with the Institution will cease. Re-registration anytime thereafter will be at the discretion of the Institution and, if permitted, will be in accordance with the rules applicable at that time

EC2. GENERAL RULES

Except where otherwise stated in Rules EC3 to EC9 and in the rules for specific instructional programmes, the General Rules for all courses shall apply to instructional programmes in this department.

EC3. REGISTRATION

In addition to the General Rules, pertaining to Registration a student whose fees are paid by his or her employer shall provide a letter of authority to this effect.

EC4. ENTRANCE REQUIREMENTS

In addition to the General Rules pertaining to Entrance Requirements specific requirements apply to all the revised instructional programmes offered in this department and these are set out in the rules for the instructional programmes.

EC5. WORK DONE DURING THE SEMESTER

In addition to Rule G12 the following specific rules apply to all modules:

1) The determination of the year/semester mark, where applicable, for each module for the purpose of issuing a certificate in terms of the General Rules is indicated

with the syllabus for each module.

2) A student who for any reason is absent from a particular practical or laboratory practical/test, must provide proof of his/her reason for absence to the particular lecturer concerned in accordance with Rule EC10 using the appropriate form available from the Departmental reception. Failure to do so will result in a zero mark being recorded for the practical or laboratory practical/test.
3) In the case where a module is evaluated by a continuous or 100% course work system, then any student failing to obtain a result of 50% or higher, and any sub-minimum stipulated for such module (including GA's), will have to repeat that module.
4) Where a module year mark has a project or practical component, then the mark for such component cannot be carried over to a subsequent semester where the module is failed, unless so stipulated in the module specific rules.

EC6. CONDUCT OF STUDENT IN LABORATORY

Rules of conduct pertaining to the specific laboratory, as approved by the department, shall apply to all students registered for the module.

EC7. SUPPLEMENTARY EXAMINATIONS

The provisions as contained in the General Rules will apply to all examinable modules/subjects in this department.

EC8. PROMOTION TO HIGHER LEVEL

Diploma in Engineering Technology in Civil Engineering:

All graduates of programmes within the Department of Civil Engineering (Midlands), must demonstrate competence in the Graduate Attributes (GAs) prescribed by both the University, and the Engineering Council of South Africa (ECSA). There is significant overlap between the University's GAs and those of ECSA. Where the graduate attributes are assessed, they are framed as per the graduate attributes prescribed by ECSA, and it is considered that if a student demonstrates competence in all the ECSA GAs, they have too demonstrated competence in the DUT GAs.

Graduates from the programme will need to demonstrate competence in the 10 graduate attributes as identified in the Engineering Standard E-08-PN (Rev 4)

In addition to the requirements of the General Rules no student shall be permitted to register:

1. A student may progress to the second year if they have passed at least 50% (8 modules) modules from the first-year offerings.

2. Notwithstanding the above, no student will be permitted to register for any module combination where there will be any timetable clashes, in the case where all modules are first time registrations. In the case where a student is repeating modules the student will be allowed a maximum of one period clash per repeated registered module, in the semester that the modules is being offered.

Note:
Students transferring from other institutions and entering the programme at second semester level or higher will be accepted only if they have already passed all of the equivalent modules from the first semester level (i.e. the standard S1). Students who have already passed Engineering Drawing (or equivalent) at another institution may be required to undergo and pass a proficiency test before they may be considered to be granted an exemption from the module or be permitted to register for any of the standard third or fourth or fifth or sixth semester modules. A transferring student who applies for admission, and who has completed equivalent modules through another tertiary institution will only be granted an exemption for equivalent modules if prior disclosure of these modules has been made and the Head of Department has given confirmation thereof in writing prior to registration.

The graduate attributes will be introduced (I) in the first year, developed (D) in the second year, and finally culminate with an assessment (A) at the exit level. GAs assessed at the exit level will be externally moderated. The mapping for GAs is given on Table 4 and the departmental Graduate Assessment Strategy is given below.

Where the graduate attributes are assessed, the department follows the below principles:

- GAs are assessed according to ECSA Unit Standard E-08-PN
- GA development and assessment is shown in the mapping for GAs in Table 4
- GAs may be developed implicitly or explicitly
- Each GA must be developed explicitly once at level 1 (introduced), explicitly once again at level 2 (developed)
- Where a GA is developed explicitly, it is shown in Table 4, and the study guide must contain reference to the GA, the range statement and explain how the GA is to be developed.
- Where a GA is developed implicitly, it may contribute in a minor way towards the development of the GA. These are not referenced in Table 4 and may or may not be referenced in the study guide, at the lecturer's discretion
- Each GA must be assessed once at the exit level. The assessment is guided by a rubric, which is derived from the respective range of statement and associated assessment criteria
- The assessment rubrics, range statement, and associated assessment criteria are shown in the relevant module study guide
- In the event of students not demonstrating competence, according to the

assessment criteria of the rubric, they will be permitted to correct inadequacies in the work and resubmit.

- The module in which the GA is assessed will be failed, if competence in the GA is not demonstrated after resubmission
- All assessments of GAs are externally moderated, to both DUT and ECSA requirements
- GAs are recorded on the ITS system, in a separate column, with 1 meaning competence demonstrated, and 0 zero meaning competence no demonstrated
- Evidence of GA assessments are kept in the respective subject file.

Table 4: ECSA Graduate Attribute Mapping

Diploma in Engineering Technology in Civil Engineering (DICVE1)											
Code	Course/module Name	Role of course/module in developing student toward Exit Level Outcomes / ECSA Graduate Attributes									
		ECSA GA 1	ECSA GA 2	ECSA GA 3	ECSA GA 4	ECSA GA 5	ECSA GA 6	ECSA GA 7	ECSA GA 8	ECSA GA 9	ECSA GA 10
		Problem solving	Application of scientific and engineering knowledge	Engineering Design	Investigations, experiments and data analysis	Engineering methods, skills and tools, including Information Technology	Professional and technical communication	Sustainability and Impact of Engineering Activity	Individual, Team and Multidisciplinary Working	Independent Learning Ability	Engineering Professionalism
Semester 1: Compulsory Courses/Modules											
Computer Applications A	CMAA101					BD				BD	
Computer Applications B	CMAB101	BD								BD	
Cornerstone 101	CSTN101										
Drawing Applications	DRAP101	BD	BD			BD					
Introduction to Construction Materials	ICMT101				BD		BD		BD	BD	BD
Law for Life	LWLF101										BD
Mathematics A	MMTA101	BD	BD								
Physics A	PSCA101		BD								
Semester 2: Compulsory Courses/Modules											
Civil Engineering Methods	CEMT101			BD		ID		BD		ID	
Civil Mechanics	CIVM101	ID	ID		ID				ID	ID	
Drawing (Intro to CAD)	DICD101			ID		ID	ID		ID	ID	
Mathematics B	MMTB101	ID	ID								
Physics B	PSCB101		ID								
Surveying for Civil Engineering	SVCE201	ID	ID	ID					ID	ID	
Technical Literacy	TLIT101						ID			ID	ID
Semester 3: Compulsory Courses/Modules											
Contract Management	**CNTM201**										**A**
Introduction to Water Engineering A	IWEA201		ID			ID			ID	ID	
Mathematics C	MMTC101	ID	ID								
Physics C	PSCC101		ID								
Soil Mechanics A	SLMA201	ID				ID		ID		ID	
Structural Mechanics	STME201			ID		ID		ID	ID	ID	
Transportation Technology A	TRNA201	ID	ID	ID							
Semester 4: Compulsory Courses/Modules											
Contract Administration	**CTAD201**								**A**		
Design Project	**DSGP201**	**A**		**A**			**A**	**A**			
Introduction to Structural Design	**INSD201**					**A**					
Introduction to Water Engineering B	IWEB201										
Soil Mechanics B	**SLMB201**				**A**						
Structural Analysis	**STRA201**		**A**								
Structural Detailing	**STDT201**									**A**	
Transportation Technology B	TRNB201										

Key: **BD: Basic Development** **ID: Intermediate Development** **A: Exit-level Assessment**

BD: Basic Development – First Year students (mainly the NS1 leading to NS2 level) are exposed to the basic level of the graduate attributes.

ID: Intermediate Development – Transition from First to Second Year (mainly NS2 level to NS3 level) students are exposed to the intermediate level of the graduate attribute.

A: Exit-level Assessment – Transition from Second Year, NS3 to NS4 exit level. Students are assessed at the advanced level of the graduate attribute. Rubrics for each GA, as well as a detailed brief is prepared by the respective module lecturer. The following questions form part of the rationale:

1. *Where is the GA outcome assessed?*
2. *How is the GA outcome assessed?*
3. *What is satisfactory performance?*
4. *What is the consequence of unsatisfactory performance?*
5. *How is the lecturer keeping a record of evidence for each student?*

EC9. MINIMUM INSTRUCTIONAL PROGRAMME

Notwithstanding anything to the contrary in the General Rules, the minimum instructional programme for each qualification in this department shall be as stated in the rules for that instructional programme.

EC10. SPECIAL TESTS

The Head of Department may grant a special test to a student who has been prevented from taking a test:

1. by illness on the day of the test or immediately before it, provided that he/she submits a medical certificate on the prescribed form (available from the Departmental reception). It is required that a medical practitioner, registered by the Health Professions Council of SA (HPCSA), homoeopath or chiropractor, registered with the South African Associated Health Board, specifies the exact

nature and duration of the illness and that for health reasons it was impossible or undesirable for the student to sit for the test. Such students should submit such certificate to the head of department on the day as determined by the practitioner that the student should return to lectures immediately following such illness, or on one of the two following working days.

or

2. by circumstances which in the opinion of the head of department were beyond his/her control at the time of the test provided that satisfactory evidence of such circumstances is provided. Such circumstances shall not include:
   i. any misinterpretation by him/her of the date, time or venue of the test,
   ii. transportation difficulties, where his/her residential term time address is within the area serviced by a scheduled bus or commuter train service to the central Pietermaritzburg area, and provided otherwise that he/she informs the head of department of such difficulty prior to the time of commencement of the test,
   iii. failure by him to bring to the test venue any equipment normally required for that module as specified in the study guide for the particular module.

   For the purpose of this rule test shall mean any written, oral or practical test, set for the purpose of determining or contributing towards a semester mark for a module, and shall include tests set for modules which, are evaluated by continuous evaluation.

Any student who misses a test and who does not qualify for a special test, and any student who qualifies for a special test but fails to write it, shall be awarded a zero mark for the missed test.

Special tests for all modules shall be written, either immediately on submitting the medical certificate, or alternatively, within the last two weeks of official lectures of each semester and in which case may be based on the entire semesters work. There will only be one special test set per semester, and should a student miss this test then they will not be afforded a further opportunity to write and will thus be awarded zero.

EC11. REFUSAL OF RE-REGISTRATION

1) A student who fails any module for the first time shall be placed on an academic warning and may be allowed to re-register with special conditions.

2) A student who has not successfully completed any module after two periods of registration for that module shall only be permitted to re-register full-time for that module at the discretion of the Departmental Appeal Committee.

3) A student who has been refused permission to re-register for a module in terms of Rule 11.2) will not be permitted to register for any other module in that qualification. A student will thereby be unable to complete the qualification unless the outstanding modules/subjects are attended and passed at another institution and exemptions granted in accordance with the General Rules.

4) A student who has not completed the Diploma in Engineering Technology: Civil Engineering within three years of the first registration, may be refused permission to register, or, at the discretion of the Departmental Appeal Committee, may be accepted subject to special conditions.

5) A student wishing to appeal to the Faculty Board of Engineering and the Built Environment against the application of this rule must submit an on- line appeal via the student portal in which he/she explains the reasons for his/her appeal. This on-line appeal must be submitted within five (5) University working days of being officially notified in writing that he/she has not been permitted to re-register. No on-line appeals will be considered after this.

6) **EXCLUSION DUE TO UNSATISFACTORY ACADEMIC PROGRESS (Diploma in Engineering in Civil Engineering)**

Further to Rule G17, should a student not fulfil the below, the student will be excluded:

- To have passed all first-year modules by the end of their second year of registration;
- To have passed all second-year modules by the end of their third year of registration;
- To have passed at least half of the third-year modules by the end of their fourth year of registration;
- To complete the qualification by the end of five years of registration

Any appeal by a student against academic exclusion must be made within ten working days of receipt of the notice of exclusion, on an 'APPEAL FOR RE-REGISTRATION' form obtainable from the Faculty Office/Department.

EC13. LATE REGISTRATION

1) No student will be permitted to register for any module offered by this department later than one week after the official commencement of full-time semester lectures. Students who have not registered within this period will only be permitted to register on the approval of the Head of Department or Executive Dean.

2) No student will be permitted to add or delete any module later than one week after the commencement of full-time semester lectures, except where the result of a supplementary examination has delayed such change or addition, or as a result of an administrative error by the University.

3) Where a student is unable to register by the published departmental late

registration date referred to in 13.1), for reasons deemed acceptable to the Head of Department, then such student will only be permitted to register if they have obtained and had approved, an Application for Late Registration form, by the published late registration closing date.

EC14. TIMETABLE CLASH

No student will be permitted to register for any module combination where there will be any timetable or test clashes. In the event of there being a clash, then the student will be required to register for the module from the lowest level of the qualification for which they are registering.

Furthermore, it is the students' responsibility to check prior to registration that there are no clashes as no special arrangements will be made to accommodate such instances. In the event of a student missing a test/practical/deadline as a result of a clash, a zero mark will be awarded for that component of the work missed.

EC15. STUDENT DRESS

Closed shoes and protective clothing must be worn for the duration of the time spent in any departmental laboratory. Appropriate safety equipment needs to be worn where applicable, or as detailed in the laboratory practical manual. Students are required to adhere to the provisions of the Occupational Health and Safety Act at all times.

EC16. ACCESS TO DEPARTMENTAL COMPUTER LABORATORIES

No student is permitted to have access to any of the dedicated departmental computer laboratories unless he/she has been granted the necessary authority to do so, and:

1) the module lecturer or an approved departmental tutor is present;

or

2) the Departmental Computer Technician is present.

EC17. COMPETENCY MODULES

Where a module comprises more than one sub-module, and one of the sub- modules includes a competency-based assessment, then such competency sub-module must also be passed before a student will be permitted to register for any module for which the modularized sub-module is a prerequisite.

EC18. AWARDING OF DIPLOMA

Diplomas are not automatically awarded to candidates who have satisfied all of the requirements for the programme. The onus is on the student to apply to the University for the award of the diploma. In this regard, the candidate should obtain the necessary forms from the departmental secretary. A certified copy of a valid identity document must be attached to the diploma application.

EC19. ACADEMIC INTEGRITY

The Department expects students to adhere to a strict code of ethics, and the following principles regarding academic integrity apply;

- **Know your rights** – do not allow other students in your class to diminish the value of your achievement by taking unfair advantage. Report any academic dishonesty to the Head of Department.
- **Acknowledge your sources** – whenever you use words or ideas that are not your own when writing a paper or assignment, use quotation marks where appropriate and cite your source in a footnote, and back it up at the end with a list of references consulted.
- **Protect your work** – in examinations, do not allow your neighbours to see what you have written, you are the only one who should receive credit for what you know.
- **Avoid suspicion** – do not put yourself in a position where you can be suspected of having copied another person's work or having used unauthorised notes in an examination. Even the appearance of dishonesty may undermine your lecturer's confidence in your work.
- **Do your own work** - the purpose of assignments is to develop your skills and measure your progress. Letting someone else do your work defeats the purpose of your education and may lead to serious charges against you.
- **Never falsify** a record or permit another person to do so - academic records are regularly audited and students whose results have been altered put their entire academic record at risk.
- **Never fabricate** data, citations, or experimental results - many professional careers have ended in disgrace, even years after the fabrication first took place.
- **Always tell the truth** when discussing your work with your instructor - any attempt to deceive may destroy the relation of teacher and student.

EC20. REQUIREMENT TO PASS THE GRADUATE ATTRIBUTES (GAs)

In summary, engineering students completing this qualification shall demonstrate competence in all of the twelve GAs, as required by the ECSA. In modules where GAs are assessed, the student needs to achieve a minimum final mark of 50% as well as satisfy the GA outcome. A student that achieves a minimum final mark of 50% but fails to achieve the outcome will fail the module. In addition, students must achieve sub-minimum marks for practicals, tests or other assessments in the respective module.

EC21. TEST/EXAMINATION VENUE RULES

In addition to the requirements of the General Rule G13 (1) (p), No student shall be permitted to have ANY cell phone, smart watch or mobile electronic device in a departmental test or examination venue. Calculators required as stipulated on the question paper are permitted.

Lockers have been provided within the Civil Engineering Building to enable a student to safely secure their phone/s mobile electronic device prior to entering the

test/examination venue.

Where a student is found to have in their possession ANY cell phone mobile electronic device, then such device shall be confiscated, the student will be instructed to leave the test/examination venue, and where appropriate disciplinary charges will be laid

8. PROGRAMME STRUCTURE

8.1 DIPLOMA IN ENGINEERING TECHNOLOGY IN CIVIL ENGINEERING

The Diploma in Engineering Technology in Civil Engineering programme shall have a minimum duration of four (4) semesters of full-time study and shall consist of the modules listed below:

Table 5: Proposed Dip Eng Tech Civil Curriculum Structure (effective from January 2025) with Single Registration

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
Computer Applications A	CMAA101	1	**Yes**	No	5	12	C	-	CA
Cornerstone 101	CSTN101	1	**Yes**	No	5	12	C	-	CA
Drawing Applications	DRAP101	1	**Yes**	No	5	8	C	-	CA
Intro to Construction Materials	ICMT101	1	**Yes**	No	5	8	C	-	CA
Law for life	LWLF101	1	**Yes**	No	5	8	C	-	CA
Mathematics A	MMTA101	1	**Yes**	No	5	12	C	-	CA
Physics A	PSCA101	1	**Yes**	No	5	8	C	-	EX
Total credits for Yr 1 Sem 1 = 68									
Civil Engineering Methods	CEMT101	2	No	**Yes**	5	12	C	-	CA
Civil Mechanics	CIVM101	2	No	**Yes**	5	8	C	-	EX
Drawing (Intro to CAD)	DICD101	2	No	**Yes**	5	8	C	CMAA101 DRAP101	CA
Mathematics B	MMTB101	2	No	**Yes**	5	12	C	MMTA101	CA
Physics B	PSCB101	2	No	**Yes**	5	8	C	-	EX
Surveying for Civil Engineering	SVCE201	2	No	**Yes**	6	12	C	-	CA
Technical Literacy	TLIT101	2	No	**Yes**	5	8	C	-	CA
Total credits for Yr 1 Sem 2 = 68 **Total credits for Yr 1 = 136**									
Contract Management	CNTM201	3	**Yes**	No	6	8	C	TLIT101	EX
Intro to Water Engineering A	IWEA201	3	**Yes**	No	6	12	C	-	EX

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
Mathematics C	MMTC101	3	**Yes**	No	5	12	C	MMTB101	CA
Physics C	PSCC101	3	**Yes**	No	5	8	C	-	EX
Soil Mechanics A	SLMA201	3	**Yes**	No	6	8	C	ICMT101	CA
Structural Mechanics	STME201	3	**Yes**	No	6	8	C	CIVM101 PSCA101 PSCB101	EX
Transport Technology A	TRNA201	3	**Yes**	No	6	12	C	DICD101	EX
Total credits for Yr 2 Sem 1 = 68									
Contract Administration	CTAD201	4	No	**Yes**	6	8	C	CNTM201	EX
Design Project	DSGP201	4	No	**Yes**	6	12	C	CNTM201 IWEA201 MMTC101 PSCC101 SLMA201 STME201 TRNA201	CA
Intro to Structural Design	INSD201	4	No	**Yes**	6	8	C	PSCC101 STME201	CA
Intro to Water Engineering B	IWEB201	4	No	**Yes**	6	8	C	IWEA201	EX
Soil Mechanics B	SLMB201	4	No	**Yes**	6	8	C	SLMA201	EX
Structural Analysis	STRA201	4	No	**Yes**	6	12	C	STME201	EX
Structural Detailing	STDT201	4	No	**Yes**	6	8	C	DICD101	CA
Transport Technology B	TRNB201	4	No	**Yes**	6	12	C	TRNA201	EX
Total credits for Yr 2 Sem 2 = 76 **Total credits for Yr 2 = 144**									

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
Total credits for programme = 280									

Note: A student who registers for Design Project will be approved for one of three specialist design fields i.e. structures, transportation or water engineering.

Specialist Area	Co-requisite Modules
Structural Engineering	CTAD201,SLMB201 & STRA201
Transportation Engineering	CTAD201, SLMB201 & TRNB201
Water Engineering	CTAD201, IWEB201 & SLMB201

In addition, where a student elects the Structural option, they must already have passed INSD201 and STDT201.

8.2 DIPLOMA IN THE BUILT ENVIRONMENT IN CONSTRUCTION STUDIES

The Diploma in the Built Environment in Construction Studies programme shall have a minimum duration of four (4) semesters of full-time study and shall consist of the modules listed below. Please note that not all the modules for each semester are available every semester.

Table 6: Diploma in the Built Environment in Construction Studies Curriculum Structure

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
Mathematics (Built Environment) 1A	MFBE101	1	**Yes**	No	5	12	C	-	EX
Physics (Built Environment) 1A	PFBE101	1	**Yes**	No	5	12	C	-	EX
Quantity Surveying 1A	QUSU101	1	**Yes**	No	5	8	C	-	EX
Construction Organisation 1A	CORG101	1	**Yes**	No	5	8	C	-	EX
Construction Methods 1A	CMDS101	1	**Yes**	No	5	8	C	-	EX
Cornerstone	CSTN101	1	**Yes**	No	5	12	C	-	CA
Technical Literacy 1B	TLIT101	1	**Yes**	No	5	8	C	-	CA
Total credits for Yr 1 Sem 1 = 68									
Mathematics (built Environment) 1B	MFBE102	2	No	**Yes**	5	12	C	-	EX
Quantities & Documentation 1B	QUDO101	2	No	**Yes**	5	8	C	QUSU101	EX
Construction Management 1B	CMNA101	2	No	**Yes**	5	8	C	-	EX

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
Construction Technology 1B	CTEC101	2	No	**Yes**	5	8	C	-	EX
Information & Communication & Literacy & Skill	ICTL101	2	No	**Yes**	5	8	C	-	CA
Interpretation of Documentation 1B	INDO101	2	No	**Yes**	5	8	C	-	EX
Materials 1B	MTRS101	2	No	**Yes**	5	12	C	-	EX
Total credits for Yr 1 Sem 2 = 64 **Total credits for Yr 1 = 132**									
Quantities & Documentation 2A	QUDO201	3	**Yes**	No	6	8	C	QUSU101 QUDO101	EX
Construction Management 2A	CMNA201	3	**Yes**	No	6	8	C	CORG101 CMNA101	EX
Construction Technology 2A	COTE202	3	**Yes**	No	6	8	C	CTEC101	EX
Site Surveying 2A	SSRV201	3	**Yes**	No	6	12	C	-	EX
Mechanics (Built Environment) 2A	MFBE201	3	**Yes**	No	6	12	C	-	EX
Introduction to Price Analysis 2A	INPA201	3	**Yes**	No	6	8	C	-	EX
Health & Safety 2A	HEAS201	3	**Yes**	No	6	8	C	-	EX
Labour Relations 2A	LARE201	3	**YES**	No	6	8	C	-	EX
Total credits for Yr 2 Sem 1 = 72									
Quantities & Documentation 2B	QUDO202	4	No	**Yes**	6	8	C	QUDO201	EX
Construction Management 2B	CMNA202		No	**Yes**	6	8	C	CMNA201	EX

Name of module	Module Code	Level	Offered in Semester 1?	Offered in Semester 2?	NQF Level	Module Credits	Core/ Elective	Pre-Req.	Examinable (EX) / Continuously Assessed (CA)
		4							
Construction Technology 2B	COTE202	4	No	**Yes**	6	8	C	COTE201	EX
Entrepreneurship 2B	ENPRE201	4	No	**Yes**	6	8	C	-	EX
Environmental Management 2B	ENVM201	4	No	**Yes**	6	8	C	-	EX
Capstone Project	CPRO201	4	No	**Yes**	6	20	C	-	EX
Total credits for Yr 2 Sem 2 = 60 **Total credits for Yr 2 = 132** **Total credits for programme = 264**									

8.3 MASTER OF ENGINEERING

ENTRANCE REQUIREMENTS

Every candidate for this qualification shall have:
completed the requirements for the BEng Hons or equivalent;
Or
have completed a post graduate Diploma in Civil Engineering Technology,
Or
have been granted a conferment of status for the above-mentioned qualification.

INSTRUCTIONAL PROGRAMME

This is a research-based qualification requiring advanced studies on behalf of thestudent in any modules related to the specific field of study. Students are required to undertake research under the guidance of a supervisor.

8.4 MASTER OF THE BUILT ENVIRONMENT

ENTRANCE REQUIREMENTS

Every candidate for this qualification shall have:
completed the requirements for the BEng Hons in Geomatics or equivalent;
Or
have been granted a conferment of status for the above-mentioned qualification.

INSTRUCTIONAL PROGRAMME

This is a research-based qualification requiring advanced studies on behalf of the student in any modules related to the specific field of study. Students are requiredto undertake research under the guidance of a supervisor.

8.5 DOCTOR OF ENGINEERING

ENTRANCE REQUIREMENTS

Every candidate for this qualification shall have:
completed the requirements for the MEng or equivalent
Or
have been granted a conferment of status for the above-mentioned qualification.

INSTRUCTIONAL PROGRAMME

This is a research-based qualification requiring advanced studies on behalf of the student in any modules related to the specific field of study. Students are required to undertake research under the guidance of a supervisor.

9. MODULE BREAKDOWN

9.1 DIPLOMA IN ENGINEERING TECHNOLOGY IN CIVIL ENGINEERING MODULES:

CIVIL ENGINEERING METHODS (CEMT101)

Theory:	3 periods per week	
Semester Mark:	One Test:	- 30%
	One Test:	- 30%
	Control Test:	- 40% (subminimum of 50%)
		No Examinations; 100% course mark

SYLLABUS

1. Earthworks
2. Structures
3. Road Engineering
4. Dams
5. Bridges
6. Tunnels
7. Harbours
8. Railways
9. Airports
10. Drainage
11. Safety

CIVIL MECHANICS (CIVM101)

Theory:	2 periods per week	
Tutorial:	2 periods per week	
Practical:	1 period per week	
Semester Mark:	Two Tests:	- 15% each
	Two Practicals	- 5% each (subminimum of 50% on each)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Forces and Loads
2. Moment Equilibrium
3. Support Types/Reactions
4. Triangulated pin-jointed Frames and Trusses

COMPUTER APPLICATIONS A (CMAA101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Semester Mark:	Four Practical Tests:	
	Computer Utilization	- 10%
	Operating Systems	- 15%
	Spreadsheets & Word Processing	- 40%
	Control Test:	- 35% (subminimum of 40%)
		No examination; 100% course mark

SYLLABUS

1. Computer Utilisation and Hardware
2. Operating Systems – Windows
3. Word Processing
4. Spreadsheets

CONTRACT ADMINISTRATION (CTAD201)

Theory:	3 periods per week	
Tutorial:	1 period per week	
Practical:	1 period per week	
Semester Mark:	Two Tests:	- 10% each
	Two Assignment:	- 10% each (assessing GA8 at the exit level subminimum of 50%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Measurement of Civil Engineering Works
2. Bills of Quantities
3. Specifications
4. Estimating and Tendering
5. General Conditions of Contract (latest edition)
6. Software Applications

CONTRACT MANAGEMENT (CNTM201)

Theory:	3 periods per week	
Tutorial:	1 period per week	
Practical:	1 period per week	
Semester Mark:	Two Test:	- 10% each
	Assignment:	- 20% (assessing GA10 at the exit level subminimum of 50%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Contract Administration
2. Planning Techniques
3. Financial Planning
4. Labour and Safety Legislation

CORNERSTONE 101 (CSTN101)

Theory:	2 periods per week	
Tutorial:	2 period per week	
Semester Mark:	Weekly Tasks	- 10%
	Tutorial Attendance	- 10%
	Two Assignments	- 40% each
		No examination; 100% course mark

SYLLABUS

The module content will be developed around the concept of journeys, across time, across space, and across human relationships. The module will bring different disciplinary perspectivesto this content – environmental, historical and sociological in particular.

DESIGN PROJECT (DSGP201)

Theory:	2 periods per week	these would be consultation sessions
Practical:	2 periods per week	
Semester Mark:	One Industry based Project	- 100% (assessing GA1, GA3, GA6, & GA7, at the exit level, subminimum 50%)
	Preliminary Design Phase (GA1)	- 30% (subminimum of 50% based on report)
	Detailed Design Phase (GA3 and GA7)	- 50% (subminimum of 50% based on report)
	Oral Presentation (GA6)	- 20% (subminimum of 50% based on report)
		No Examination; 100% course mark

SYLLABUS

The student will be required to identify a discipline specific industry project which they will then undertake a detailed design of, sourcing the necessary materials, specifications, and technology applications to complete the project, guided by discipline specialist staff.

DRAWING APPLICATIONS (DRAP101)

Theory:	3 periods per week	
Tutorial:	2 period per week	
Semester Mark:	Three Assignments	- 12% each
	One Test	- 24%
	Control Test:	- 40% (subminimum of 50%)
		No examination; 100% course mark

SYLLABUS

1. Drawing Standards as per SANS latest code
2. Basic Instrument Drawing Skills
3. Using Scales
5. Isometric Drawings
6. Orthographic Drawings
7. House Plans

4. Dimensioning Standards
8. Basic Road Design Drawings

DRAWING INTRO TO CAD (DICD101)

Theory:	3 periods per week	
Tutorial:	1 period per week	
Semester Mark:	One Test	- 20%
	One Test	- 20% (subminimum of 50%)
	Control Test:	- 60% (subminimum of 60%)
		No examination; 100% course mark

SYLLABUS

1. Basic CAD operation
2. Basic Architectural Drawings
3. Basic Reinforced Concrete Element Drawings
4. Basic Road and Construction Detail Drawings

INTRODUCTION TO CONSTRUCTION MATERIALS (ICMT101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 20% each
	Two Practicals :	- 5% each (40% subminimum)
	Control Test:	- 50% (50% subminimum)
		No examination; 100% course mark

SYLLABUS

1. Soils
2. Bitumen
3. Concrete
4. Laboratory Practicals

INTRODUCTION TO STRUCTURAL DESIGN (INSD201)

Theory:	2 periods per week	
Tutorial:	2 periods per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 15% each
	One Control Test:	- 40% each (40% subminimum)
	Three Practicals:	- 10% each (50% subminimum total)
		No examination, 100% course work

SYLLABUS

1. Loading, Analysis and Design of determinate structures
2. Introduction to the design of steel sections and members
3. Introduction to the design of concrete sections and members
4. Structural Design software applications

INTRODUCTION TO WATER ENGINEERING A (IWEA201)

Theory: 3 periods per week

Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 12% each
	Four Practicals	- 2% each (subminimum of 40% on total)
	One Assignment:	- 8% (subminimum of 50%)
	Examination:	- 60% (subminimum of 40% on total)

SYLLABUS

1. Properties of Fluids
2. Static pressure and head
3. Buoyancy and flotation
4. Liquids in motion
5. Momentum and fluid flow
6. Forces on reducers and bends
7. Weirs, flumes and notches
8. Losses of energy in pipelines
9. Pipelines
10. Open channel flow, energy and hydraulic jump.
11. Potable water distribution, pumping and storage.
12. Sewage reticulation
13. Water software applications

INTRODUCTION TO WATER ENGINEERING B (IWEB201)

Theory:	2 periods per week	
Tutorial:	2 period per week	
Semester Mark:	Two Tests	- 20% each
	Examination	-60 %

SYLLABUS

1. Introduction to Public Health
2. Overview of wastewater collection
3. Overview of the characterisation of waters and waste waters including environmental pollution.
4. Introduction to treatment processes
5. Physical treatment processes
6. Chemical treatment processes
7. Biological treatment processes
8. Sludge treatment and disposal
9. Water treatment
10. Wastewater treatment
11. Introduction to Hydrology
12. Flood Determination

LAW FOR LIFE (LWLF101)

Theory: 1 period per week

Tutorial: 1 period per week
Semester Mark: Three Assignment: - 33,33 each
No examination; 100% course mark

SYLLABUS

1. Introduction to Law
2. Civil and Criminal Law
3. Law of Insurance
4. Law of Contract
5. Road Accident Fund
6. Marriage Law
7. Succession

MATHEMATICS A (MMTA101)

Theory: 3 periods per week
Tutorial: 2 periods per week
Semester Mark: Three Tests (best of two): - 10% each
Two Control Tests: - 40% each
No examination; 100% course mark

SYLLABUS

1. Numbers and Algebra
2. Areas and Volumes
3. Trigonometry
4. Graphs and Functions
5. Complex Numbers
6. Series: Maclaurin Series

MATHEMATICS B (MMTB101)

Theory: 3 periods per week
Tutorial: 2 periods per week
Semester Mark: Three Tests (best of two): - 10% each
Two Control Tests: - 40% each
No examination; 100% course mark

SYLLABUS

1. Calculus - Differentiation
2. Calculus - Integration
3. Linear Algebra

Statistics and Probability

MATHEMATICS C (MMTC101)

Theory: 3 periods per week
Tutorial: 2 periods per week
Semester Mark: Three Tests (best of two): - 10% each
Two Control Tests: - 40% each
No examination; 100% course mark

SYLLABUS

1. Advanced Calculus - Differentiation

2. Advanced Calculus - Integration
3. Differential Equations

Note:
A full-time student who obtained a **FINAL RESULT** of between 45% and 49% for any Mathematics Module will be allowed to write a special 3-hour make-up test covering the whole syllabus during the week after semester examinations end. If the mark obtained is used in place of the major test marks and these results in the student passing, a result of 50% will be allocated.

PHYSICS A (PSCA101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 14% each
	Practical:	- 3.6% (30% toward Final Prac Mark)
	Practical Tests:	- 8.4% (70% towards Final Prac Mark) 40% subminimum on both practical and Practical Test
	Examination -	60% (with 40% subminimum)

SYLLABUS

1. Units, Physical Quantities, Vectors
2. Equilibrium of a particle
3. Newton's Second law, Gravitation
4. Work and Energy
5. Impulse and Momentum
6. Torque
7. Elasticity
8. Periodic Motion

PHYSICS B (PSCB101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 14% each
	Practical:	- 3.6% (30% toward Final Prac Mark)
	Practical Tests:	- 8.4% (70% towards Final Prac Mark) - 40% subminimum on both practical and Practical Test

	Examination	- 60% (40% subminimum) -

SYLLABUS

1. Thermodynamics
2. Mechanical Waves
3. Vibrating Bodies
4. Acoustic Phenomena
5. Coulomb's Law
6. Current, Resistance and Capacitance

PHYSICS C (PSCC101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 14% each
	Practical:	- 3.6% (30% toward Final Prac Mark)
	Practical Tests:	- 8.4% (70% towards Final Prac Mark) - 40% subminimum on both practical and Practical Test
	Examination	- 60% (with 40% subminimum)

SYLLABUS

1. The Magnetic Field
2. Inductance
3. Maxwell's Equations
4. Electromagnetic Waves
5. The Nature and Propagation of Light
6. Atomic and Molecular Structure

SOIL MECHANICS A (SLMA201)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 15% each
	Practical:	- 10% (subminimum of 50%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Geology
2. Soil Mechanics
3. Geology Practical

SOIL MECHANICS B (SLMB201)

Theory:	2 periods per week
Tutorial:	2 periods per week
Practical:	2 periods per week

Semester Mark:	Two Tests:	- 12% each
	Two Practicals:	- 2% each
	One Practical:	- 4% (subminimum of 40% on combined practicals)
	One Assignment:	- 8% (subminimum of 50%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Permeability
2. Stresses in soils
3. Compressibility and consolidation of soils
4. Shear strength of soils
5. Stability of slops
6. Shallow foundations and bearing capacity
7. Site investigation
8. Laboratory practicals
9. Software applications

STRUCTURAL ANALYSIS (STRA201)

Theory:	3 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 12% each
	Two Practicals:	- 4% each (subminimum of 40%)
	Assignments	- 8% (subminimum of 40%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Historical background of structural analysis.
2. Stability of statically indeterminate structures.
3. Analysis of statically determinate trusses: Methods of joint, sectioning and tension coefficient.
4. Deflection in statically determinate structures: Double integration; moment-area; virtual work and strain energy methods.
5. Introduction to indeterminate structures: Three-moment Equation or moment distribution method
6. Software application to analyse determinate structures

STRUCTURAL DETAILING (STDT201)

Theory:	2 periods per week	
Tutorial:	2 periods per week	
Practical:	1 period per week	
Semester Mark:	Two Tests:	- 20% each
	One Assignment (GA 9):	- 10% (subminimum of 50%)
	Control Test:	- 50% (subminimum of 50%)

No examination; 100% course mark

SYLLABUS

1. Fundamental concept of structural detailing
2. Detailing procedure
3. Detailing of concrete structures - reinforcement
4. Detailing of steel structures
5. Software applications

STRUCTURAL MECHANICS (STME201)

Theory:	3 periods per week	
Tutorial:	2 periods per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 12% each
	One Practical:	- 8% (subminimum of 40%)
	One Assignment:	- 8% (subminimum of 50%)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Shear force and bending moments of beams
2. Direct stress and strain in structures
3. Engineering section properties
4. Bending, shear and combined stresses
5. Stability of columns
6. Analysis of retaining wall
7. Software applications

SURVEYING FOR CIVIL ENGINEERING (SVCE201)

Theory:	3 periods per week	
Tutorial:	2 periods per week	
Practical:	3 periods per week	
Semester Mark:	Two Tests:	- 10% each
	Two Practicals:	- 15%each (combined subminimum of 50%)
	Competency Test	- 10% (subminimum of 70%)
	Control Test:	- 40% (subminimum 40%)No examination; 100% course mark

SYLLABUS

1. Basic principles of surveying
2. Map projections and survey calculations
3. Horizontal control
4. Vertical control
5. Topographical surveying
6. Horizontal and vertical alignment introduction

7. Setting out of engineering works
8. Areas and volumes
9. Surveying computer applications

TECHNICAL LITERACY (TLIT101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Semester Mark:	Two Tests:	- 30% each
	One Assignment:	- 40% (with a subminimum of 50%)
		No examination; 100% course mark

SYLLABUS

1. Written Communication
2. Visual Communication
3. Oral Communication
4. Communication Theory
5. Small Group Communication and Problem Solving

TRANSPORT TECHNOLOGY A (TRNA201)

Theory:	3 periods per week	
Tutorial:	2 periods per week	
Practical:	1 period per week	
Semester Mark:	Two Tests:	- 10% each
	One Computer Assignment:	- 20% (subminimum of 50% assessing GA3)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

1. Traffic Engineering
2. Route Location
3. Basic Design Criteria
4. Horizontal Alignment
5. Vertical Alignment
6. Access Design
7. Drainage Design
8. Earthworks Design

TRANSPORT TECHNOLOGY B (TRNB201)

Theory:	3 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 10% each
	Five Practicals:	- 2% each (subminimum of 40% on total)
		- 10% (subminimum of 50%)

One Computer Assignment:
Examination: - 60% (subminimum of 40%)

SYLLABUS

1. Material Specifications and Tests
2. Pavement Design
3. Seal Design
4. Pavement Rehabilitation

9.2 DIPLOMA IN THE BUILT ENVIRONMENT IN CONSTRUCTION

STUDIES MODULES:

CAPSTONE PROJECT (CPRO201)

Practical: 4 periods per week

Semester Mark: Course mark developed as:
-Abstract (15%)
-Feasibility Report (15%)
-Proposal (15%)
-Presentation (15%)
-Draft Report (15%)
-Final Report (25%)
No Examination; 100% course mark

SYLLABUS

The project assignment should contain elements which are considered to be innovative, experimental or exploratory in nature. The student will be responsible for securing an industry sponsor with expertise in the project area and an academic mentor from professional graduates or academic staff. Evidence must be presented regarding the involvement of each mentor.

CONSTRUCTION MANAGEMENT 1B (CMNA101)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Procurement in the Construction Industry
2. Notice to bidder
3. Role of various parties involved in the preparation of tenders
4. Pretender planning stage
5. Documentation for pretender planning
6. Planning techniques
7. Introduction to MS Projects

CONSTRUCTION MANAGEMENT 2A (CMNA201)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. The composition, role players, processes and role of construction industry.
   - Role of construction industry
   - Role players and their duties
   - Impact of legislation, regulations and codes
   - Major construction activities
   - Communication techniques
2. Site administration and cost control

CONSTRUCTION MANAGEMENT 2B (CMNA202)

Theory:	2 periods per week	
Tutorial:	N/A	
Practical:	N/A	
Semester Mark:	Two Tests:	- 15% each
	Assignment 1:	- 10%
	Examination:	- 60% (with 40% subminimum)

SYLLABUS

1. Theory and principles.
   - Theory underpinning the principles of financial management in society
   - Theory underpinning the principles of marketing management in society
   - Theory underpinning the principles of production management in society
2. Systems Theory

CONSTRUCTION METHODS 1A (CMDS101)

Theory:	2 periods per week	
Semester Mark:	One Test:	- 20%
	Assignment 1:	- 20%
	Examination:	- 60% (with 40% subminimum)

SYLLABUS

1. Traditional building method
2. Frame structures
3. Industrial building system
4. Prefabricated materials
5. Steel structures

CONSTRUCTION ORGANISATION 1A (CORG101)

Theory:	2 periods per week	
Tutorial:	N/A	
Practical:	N/A	
Semester Mark:	One Test:	- 20%
	Assignment 1:	- 20%
	Examination:	- 60% (with 40% subminimum)

SYLLABUS

1. History of Construction Management
2. Organisational structure
3. Organisations involved in the Building Industry
4. Parties involved in the Construction Process
5. Duties and responsibilities of professional and Building or Construction Industry
6. Leadership

CONSTRUCTION TECHNOLOGY 1B (CTEC101)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)
-

SYLLABUS

1. Interpretation of construction drawings
2. Substructure and setting out
3. Filling on floors, dpm (damp proof membrane, dpc (damp proof course) and electrical conduits
4. Brick openings, lintels and arches
5. Doors and types of door frames
6. Setting up and building in doors frames

CONSTRUCTION TECHNOLOGY 2A (COTEC202)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Timber, steel and aluminum windows
2. Setting up and building windows
3. Roofs
4. Staircases

CONSTRUCTION TECHNOLOGY 2B (COTEC201)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A

Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Suspended slabs, formwork, and reinforcement
2. Propping and structuring of concrete
3. Finishes to wall, floors, and ceilings
4. Ironmongery, glazing and mirrors
5. Plumbing, sanitary fittings, waste, and soil pipework.

CORNERSTONE 101 (CSTN101)

Theory: 2 periods per week
Tutorial: 2 period per week
Semester Mark: Weekly Tasks - 10%
Tutorial Attendance - 10%
Two Assignments - 40% each
No examination; 100% course mark

SYLLABUS

The module content will be developed around the concept of journeys, across time, across space, and across human relationships. The module will bring different disciplinary perspectivesto this content – environmental, historical and sociological in particular.

ENTREPRENEURSHIP 2B (ENPR201)

Theory: 2 periods per week
Semester Mark: Two Tests: - 10% each
Assignment: - 20%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Impact of recent legislation on business - response to demands for redress and equity. Human resource function. Professionalism and ethics. Creative thinking Devise strategies to enable a business to respond to the challenges of the macro business environment.
2. Corporate social responsibility. Human Rights, Inclusivity and Environmental issues Team performance assessment and Conflict management Business Sectors and their environments Management and Leadership Quality of Performance within business functions
3. Investment: Securities; Investment: Insurance Forms of ownership and their impact on the business operation; Presentation of information and data response

ENVIRONMENTAL MANAGEMENT 2B (ENVM202)

Theory: 2 periods per week
Semester Mark: Two Tests: - 10% each
Assignment: - 20%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Introduction to environmental management
2. Social-environmental perspective
3. Environmental science perspective
4. Symbiotic relationship between both perspectives
5. Principles of effective environmental management
6. Environmental impact assessments
7. Environmental policies
8. Alternative construction processes to reduce impact on environment
9. Alternative material processes to reduce impact on environment
10. Legislative framework of construction control function in South Africa including implementation and enforcement
11. Major Statutes controlling building work including National Environmental Management: Protected Areas Act, 2003 (Act no. 57 of 2003), National Environmental Management: Biodiversity Act, 2004 (Act no. 10 of 2004), and National Environmental Management Act (107/1998): Environmental Impact Assessment Regulations, 2014

HEALTH & SAFETY 2A (HEAS201)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Impact of recent legislation on business - response to demands for redress and equity. Human resource function. Professionalism and ethics. Creative thinking Devise strategies to enable a business to respond to the challenges of the macro business environment.
2. Corporate social responsibility. Human Rights, Inclusivity and Environmental issues Team performance assessment and Conflict management Business Sectors and their environments Management and Leadership Quality of Performance within business functions
3. Investment: Securities; Investment: Insurance Forms of ownership and their impact on the business operation; Presentation of information and data response

INFORMATION AND COMMUNICATION LITERACY AND SKILL (ICTL101)

Theory: 1 period per week
Tutorial: 1 period per week
Semester Mark: No examination;
100% course mark

SYLLABUS

1. Basics of ICTs Hardware, Software, and Users
2. Internet Search
3. Word Processing
4. Spreadsheets
5. Presentations
6. Referencing
7. Security, Legal, Ethical, and Societal Issues
8. Economics of ICTs

INTERPRETATION OF DOCUMENTATION 1B (INDO101)

Theory: 2 periods per week
Semester Mark: Two Tests: - 10% each
Assignment: - 20%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Construction process:
   - Six stages of a construction project
   - Parties involved in each stage
   - Documentation for various stages
2. Structure of a tender and contract data:
   - Volume 1: Tendering Procedures
   - Volume 2: Returnable documents
   - Volume 3: Draft Contract
3. Contract administration:
   - Communications
   - Managing time
   - Changes to the price for the works
   - Payment certificates and invoicing
   - Disputes
   - Termination of a contract

INTRODUCTION TO PRICE ANALYSIS 2A (INPA201)

Theory: 2 periods per week

Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Various methods of inviting tenders
2. Methods of tendering
3. Estimating versus Costing
4. Approximate estimating
5. Unit rates
6. Analysis of prices:

Excavator	Carpenter and Joiner
Concreter	Plasterer
Bricklayer	Drain layer

LABOUR RELATIONS 2B (LARE201)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment 1: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Introduction
    - Basic Legal Concepts
    - Judicial System
    - Source of the Law
    - Main Divisions of the Law

2. Contractual Capacity
    - Minor
    - Contractual Capacity of a minor
    - Married Persons
3. Agreement
    - Introduction
    - Offer and acceptance
    - Duration of an offer
    - Revocation
    - Lapsing
    - Acceptance
    - Contract without Agreement

MATERIALS 1B (MTRS101)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15% each
Assignment: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Soils
2. Concrete
3. Bricks
4. Timber
5. Metal
6. Aluminum

MATHEMATICS (BUILT ENVIRONMENT) (MFBE101)

Theory: 3 periods per week
Tutorial: 2 periods per week
Semester Mark: Three Tests (best of two): - 10% each
Two Control Tests: - 40% each
No examination; 100% course mark

SYLLABUS

1. Numbers: Integers, Primes, Divisibility, Rational Numbers, Exponential Notation, Bases and Number Representation, Binary Number System, Infinity
2. Algebra:
3. Analytic Geometry:
4. Trigonometry: Pythagorean Theorem, Pi π, Sine and Cosine, Tangent and Secant, Ratios, Complex Plame, de Moivre's and Euler's Theorems, Hyperbolic Functions
5. Series: Elementary, Power, Convergence, Taylor, L'Hopital, Bernoulli
6. Calculus: Differentiation and Integration
7. Theory relating to linear algebra
8. Theory related to linear programmeming

MATHEMATICS (BUILT ENVIRONMENT) (MFBE102)

Theory: 3 periods per week
Tutorial: 2 periods per week
Semester Mark: Three Tests (best of two): - 10% each
Two Control Tests: - 40% each
No examination; 100% course mark

SYLLABUS

9. Probability:
10. Statistics:
11. Logic and Set Theory: Proof by Induction, Unions, Intersections, Difference, Symmetry
12. Probability theory and distribution
13. Statistical inference techniques theory
14. Correlation of regression analysis theory

MECHANICS (BUILT ENVIRONMENT) 2A (MFBE201)

Theory:	2 periods per week	
Tutorial:	2 periods per week	
Practical:	1 period per week	
Semester Mark:	Two Tests:	- 15% each
	Two Practicals	- 5% each (subminimum of 50% on each)
	Examination:	- 60% (subminimum of 40%)

SYLLABUS

5. Forces and Loads
6. Moment Equilibrium
7. Support Types/Reactions
8. Triangulated pin-jointed Frames and Trusses

PHYSICS FOR THE BUILT ENVIRONMENT 1A (PFBE101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Practical:	2 periods per week	
Semester Mark:	Two Tests:	- 14% each
	Practical:	- 3.6% (30% toward Final Prac Mark)
	Practical Tests:	- 8.4% (70% towards Final Prac Mark)
		- 40% subminimum on both practical and Practical Test
	Examination	- 60% (with 40% subminimum)

SYLLABUS

1. General:
    - Units, quantities and vectors
    - Newton`s laws
    - Work and energy
    - Properties and states of matter
2. Sound
3. Light
4. Principles of heat
5. Electricity
6. Thermo dynamics

QUANTITIES & DOCUMENTATION 1A (QUDO101)

Theory:	2 periods per week	
Semester Mark:	Two Tests:	- 15% each

One Assignment: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Substructure:
   - Collections
   - Strip footings
   - Foundation brickwork
   - Solid floor construction
2. Superstructure:
   - Brickwork
3. Roof construction and covering:

4. Finishes:
   - Internal and External wall finishes
   - Ceilings and cornices
   - Floor finishes
5. Openings and adjustments:
   - Window
   - Doors

QUANTITIES & DOCUMENTATION 2A (QUDO201)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15%
One Assignment: - 10% each
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Undertaking of basic descriptive quantification for small complex structures
2. Critical appraisal of the project design
3. The sequence of measurement
4. Take-off quantities on dimension paper
5. Measurement clauses and the application thereof
6. Compilation of price determination documents in schedule format

QUANTITIES & DOCUMENTATION 2B (QUDO202)

Theory: Two periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two tests- 15% each
One Assignment- 10%
Examination- 60% (Subminimum of 40%)

SYLLABUS

1. Undertaking of basic descriptive quantification for medium sized structures
2. Critical appraisal of the project design
3. The sequence of measurement
4. Take-off quantities on dimension paper
5. Measurement clauses and the application thereof
6. Compilation of price determination documents in schedule format

QUANTITY SURVEYING 1A (QUSU101)

Theory: 2 periods per week
Tutorial: N/A
Practical: N/A
Semester Mark: Two Tests: - 15 each%
One Assignment: - 10%
Examination: - 60% (with 40% subminimum)

SYLLABUS

1. Background of Quantity Surveying
2. Fundamentals of mensuration
3. Construction drawings and specifications
4. Basic descriptive quantification
5. Price determination document

SITE SURVEYING(SSRV201)

Theory:	3 periods per week	
Tutorial:	2 periods per week	
Practical:	3 periods per week	
Semester Mark:	Two Tests:	- 15% each
	Assignment:	- 10%
	Examination:	- 60% (with 40% subminimum)

SYLLABUS

15. Linear surveying + measurements
16. Setting out
17. Levelling
18. Gradients (including road and sewer levels)
19. Introduction to drainage systems
20. Introduction to areas and volumes of cut and fills
7. Introduction to traversing
8. Elementary tachometry
9. Contours
10. Survey of existing buildings

TECHNICAL LITERACY (TLIT101)

Theory:	2 periods per week	
Tutorial:	1 period per week	
Semester Mark:	Two Tests:	- 30% each
	One Assignment:	- 40% (with a subminimum of 50%)
		No examination; 100% course mark

SYLLABUS

6. Written Communication
7. Visual Communication
8. Oral Communication
9. Communication Theory
10. Small Group Communication and Problem Solving

10. ASSESSMENT

All assessment results will be available via DUT online as soon as they become available. These constitute the officially published results. The onus therefore is on the student to obtain their results via any of these mechanisms. Non-receipt of results will not be accepted as a valid reason for missing deadlines for applications for remarks, scanning, reassessment, etc. In addition to Rules G12 to GI5 the following specific rules apply to all modules:

i. The method of evaluation and compilation of the semester/progress mark in all modules will appear in the study guide for the module.
ii. A student who for any reason is absent from a particular laboratory/practical or test, must provide proof of his/her reason for absence to the particular lecturer concerned immediately on his/her return to class on the date indicated on the medical certificate and be prepared to sit a make-up test/laboratory or practical that same day or as determined by the particular staff member. Refusal to accept this will result in a zero mark for the particular test/laboratory or practical.
iii. In the case where a module is continually assessed any student failing to obtain a final result of 50% or higher will have to repeat that module.

11. EXAMINATIONS

Students who fail a module will be eligible to write a Supplementary exam in that module provided that they have obtained a final mark (semester and examination mark) of at least 45%. The semester mark that applied to the preceding examination will apply to the supplementary examination. The Supplementary examinations are offered every semester to those students who are eligible.

12. DEPARTMENTAL PHASE -OUT PLAN (280 Dip Eng Tech)

Year	2025	2026	2027	2028
	Last cohort first time entering student (new) intake.	No FTEN cohort. Only pipeline-returning students. **First offering of 360 Dip Eng Civil Eng.** **Also, give option for 280 pipeline students to transfer to the 360 Dip.**	No FTEN cohort. Only pipeline-returning students. **Also, give option for 280 pipeline students to transfer to the 360 Dip.**	No FTEN cohort. Only pipeline-returning students. **Also, give option for 280 Dip pipeline students to transfer to the 360 Dip.** FINAL YEAR of offering 280 Dip programme. Student has to be at NS3/NS4 level.
First Semester	Levels offered: NS1 & NS3	Levels offered: NS1 & NS3	Levels offered: NS3	Levels offered: NS3
Second Semester	Levels offered: NS2 & NS4	Levels offered: NS2 & NS4	Levels offered: NS4	Levels offered: NS4