

National Diploma in Construction



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National Diploma in Construction

TVET PROGRAMME



Purpose

The purpose of this award is to enable the learner to attain the standard required to achieve the National Diploma through the knowledge, skill and attitudes essential in Construction industry. It is aimed at learners who work or want to work in the Construction industry. Applicants with the required academic abilities will be able to learn and apply the principles of Civil engineering, Quantity Surveying, Architectural and construction management in Construction Industry. The theoretical knowledge will provide the learner to acquire the prerequisites to pursue further training whilst the practical component of the training will provide the learner with the necessary skills to participate in design, construction and work at supervisory level on construction site.

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Introduction

The National Diploma in Construction is a three-year (3600hours) training programme offered full-time to secondary five (S5) school leavers and learners from School of Advanced Level (SALs) as well as from another professional centre. This is equivalent to six (6) semesters. Two semesters represents one academic year. The same programme is also offered on part-time to learners already in employment over 8 semesters. Learners on the part-time come to SIT for training 1 1/2 days per week.

A learner on full time may exit after year one and qualify for the Certificate after successfully completing all the units from semesters one and two and accumulated 120 credits. A second exit point exists after the learner completes the year two, i.e. semesters, 1,2,3 and 4. The learner will qualify for an Advanced certificate in Construction if all the required units for year one and two have been successfully completed.

Entry Criteria

Learners wishing to apply for the National Diploma in Construction must have attained a minimum grade of “C” or better from the **IGCSE exam** in English, Mathematics and Design Technology or Physics.

Applicants from another professional centre may be accepted exiting with an Advanced Certificate from that Institution.

Learners should be able to:

- ⇒ Demonstrate a basic understanding of the Construction industry and role of a Construction Technician in Seychelles
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Career Opportunities in the construction industry

Career Opportunities in the construction Industry are on the increase. Graduates with a National diploma in construction can work as a junior construction Technician, at supervisory level. Career opportunities exist in both building and road construction. Junior construction technicians can be employed by the Ministry of Housing, Infrastructure and Land transport, Department of planning, Ministry of local Government as project officers, and in private construction companies.

Progression and Further Studies

Graduates on the National Diploma in Construction can apply for the City & Guilds Advanced diploma and can be accepted in different universities for a degree study in construction with specialization such as Civil Engineering, Quantity surveying, Architecture, Construction Management etc..



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Assessment Technique (s) including weighting (s)

The National Diploma grade is based on a weighted average of all unit result grades. Assessment approach varies from one unit to another. During every unit of study there is a minimum number of continuous assessments which the learner must undertake. This could be in the form of small tests and assignments and research. For the final unit assessments, in most cases a learner will have to sit for both a theory paper which can be multiple choice, structured or a mixture and a practical for skills demonstration.

Work based experience (WBE) is a compulsory unit and is assessed by the supervisor in the work place for full-time learners and through compilation of a portfolio and assessed against the performance criteria for the different elements in the WBE unit for learner on part-time.

To attain the required standard, a minimum of a pass grade must be achieved in all assessments prescribed .

Pass mark for every unit on the programme is 55%.

As per SIT Assessment Policy, the final mark for a unit is made up of 40% of all continuous assessments plus 60% from the results of the final unit assessment (s) and the following grades and corresponding marks are used

Not yet Competent-NYC-0	—	54%
Pass	- P	-55%-69%
Credit or Merit	- M or C	- 70% - 84%
Distinction	- D	- 85%+

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- ⇒ Keep abreast with the current construction technology in the industry.
- ⇒ **Assist the professional construction engineer in the areas of;**
- ⇒ Construction of simple building
- ⇒ Maintenance of simple building
- ⇒ Management of small construction projects
- ⇒ Selection of materials and application for construction of new buildings
- ⇒ Drawing of architectural design of simple buildings
- ⇒ Quoting of simple construction projects
- ⇒ Exercise substantial independence in the workplace, taking responsibility for construction work duties performed by self with others and interacting with a variety of individuals and groups to include customers, colleagues and suppliers.

The course aims at delivering detailed theoretical concepts of the related topics as well as actual practical exposure in the workshop and at related industries.



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List of Statements of Competencies for Diploma in Construction

Statement of competency	Unit Title	Semester (s) involved	Number of Credits
1. Apply health, safety and security procedures	Health, safety and security	1	4.5
2. Apply principles and practice of Timber vocation Basic Skills	Timber vocation Basic Skills	1	6.0
3. Apply principles and practice of Trowel Vocation Basic Skills	Trowel vocation Basic Skills	1	6.0
4. Apply knowledge of Basic electricity	Basic Electricity Skills	2	6
5. Apply knowledge of Basic Refrigeration	Basic Refrigeration Skills	2	6
4. Apply principles and practice of Technical Drawing	Technical Drawing	1,3	7.5
5. Demonstrate understanding and practice of Mathematics	Mathematics 1	1,3,4	20.5
6. Demonstrate Knowledge and understanding of Construction Technology	Construction technology	1,2,5	39
7. Demonstrate knowledge of the occupation of a construction Technician in the context of Seychelles	Occupation in Construction	1	3
8. Apply Principles and practice of ICT	Information and Communication Technology	1	3

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Structure of the Programme:

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Health, Safety and Security Procedures (30/15)	Basic Electricity skills (40/20)	Technical Drawing 2 (30/15)	Drawing Techniques (20/40)	Construction Technology 3 (50/100)	Conservation and sustainable construction techniques (10/20)
Timber Vocation basic Skills (40/20)	Plumbing basic skills (40/20)	Site Surveying 2 (20/10)	Site Surveying 2 (35/70)	Environmental Science (50/100)	Entrepreneurship (20/40)
Technical Drawing 1 (20/10)	Resource Management (30/15)	Mechanics (40/40)	Basic Measurement and Taking-off (40/40)	Building Services (50/100)	Research Project (10/20)
Mathematics 1 (30/15)	Construction Technology 2 (60/30)	Mathematics 2 (50/50)	Mathematics 3 (30/30)	Designing for Construction 3 (Optional) (50/100)	Construction Management (20/40)
Construction Technology 1 (100/50)	Science & Materials 1 (50/25)	Science & Materials 2 (50/25)	Renewable Energy (20/20)	Structural Mechanics (Optional) (50/100)	
Trowel Vocation basic skills (40/20)	Basic Refrigeration skills (40/20)	Computer aided Design 1 (CAD) (40/20)	Computer aided Design 2 (CAD) (15/30)	Measurement 3 (Optional) (50/100)	
Occupation in Construction in the context of Seychelles (20/10)					
ICT (20/10)					
Introduction to Resource Management (60/30)					
Painting & Decorating Basic Skills (40/20)	Work Based Experience (WBE rotation 1) (210) 6 weeks	Work Based Experience (WBE rotation 2) (210)	Work Based Experience (WBE rotation 3) (210)		Work Based Experience (WBE rotation 4) (420)
Number of contact hours/ Non-contact hours per semester					
Semester one: 400/200 (600) Notional Hours (400+200) = 600	Semester one: 260/130 (390) Notional Hours (260+130+210) = 600	Semester one: 230/160 (390) Notional Hours (230+160+210) = 600	Semester one: 160/230 (390) Notional Hours (160+230+210) = 600	Semester one: 200/400 (600) Notional Hours (200+400) = 600	Semester one: 120/60 (180) Notional Hours (120+60+420) = 600
Total hours for the year one of programme: 1200		Total hours for the year one of programme: 1200		Total hours for the year one of programme: 1200	

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Statement of competency	Unit Title	Semester (s) involved	Number of Credits
9. Execute all activities related to Resource Management	Resource Management	1,2	13.5
10. Apply Principles and practice of Painting and Decorating Basic Skills	Painting and Decorating Basic Skills	2	6.0
11. Apply Principles and practice of Plumbing Basic Skills	Plumbing Basic skills	2	6.0
12. Demonstrate understanding of Science and Materials	Science and Materials	2,3	15
13. Apply Principles and practice of Mechanics	Mechanics	3	8
14. Apply Principles and practice of Basic CAD Drawings	Computer Aided Design	3, 4	10.5
15. Demonstrate understanding and practice of Drawing Technics	Drawing Techniques	4	6
16. Demonstrate Knowledge and practice of Site Surveying	Site Surveying	4	10.5
17. Apply Principles and practice of Measurement	Measurement	4,5	23

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18. Demonstrate understanding and practice of Environmental Science	Environmental Science	5	15
19. Demonstrate Knowledge and practice of Building Services	Building Services	5	15
20. Demonstrate understanding and practice of designing for construction	Designing for Construction	5	15
21. Demonstrate understanding and practice Conservation and sustainable construction techniques	Conservation and sustainable construction techniques	6	3
22. Demonstrate understanding of Entrepreneurship	Entrepreneurship	6	6
23. Apply Principles and practice of Research Project	Research Project	6	3
24. Apply Principles and practice of Management	Management	6	6
25. Execute all activities related to construction during work based-experience	Work Based Experience (WBE)	2,3,4,6	1050
Total			

Certification

To be awarded certificate in National Diploma in Construction, the learner must have achieved the expected performance criteria set out in the different elements of each unit that make up the programme. The total credit requirement for this National Diploma is 360 Credits .

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Books and References for Study

A number of publications are available for study and training in the National Diploma in construction. They are books which are regularly updated with new editions. Learners are advised to identify the latest versions.

The following are available in the SIT Library and can be borrowed for study and reference:

Building construction Handbook, R. Chudley & R. greeno
 Environmental science in Building Randall McMukkan
 Construction Technology Vol 1, R. Chudley
 Construction Technology Vol 2. R. Chudley
 Construction Technology Vol 3. R. Chudley
 Advanced construction Technology, R. Chudley & R. Greeno
 Surveying for Construction, W. Erwin
 Materials Science for Construction, A. Ahmed & J. Sturges

<http://www.emeraldinsight.com>

<http://www.rics.org/us/news/journals/construction>

<http://.asce.org/construction-engineering/construction>

<http://www.cpwr.com/publication/articles-and-industry>

