



National Diploma: Structural Steelwork Detailing

Overview

National Diploma: Structural Steelwork Detailing Qualification will provide learners with the standards required to satisfy the challenges of participating effectively in the steel construction industry as a structural steel detailing specialist. Skills covered in this qualification relates to the production of **structural steel detailing drawings** for fabrication and erection of steel structures as well as the understanding of the steel construction industry and how to operate within the legislative, safety and quality systems which govern this industry.

This qualification has been developed to assist with standardisation across the steel construction industry. This will allow a person to register as a structural steel detail draughtsman and lay a foundation for future career advancement to **supervisory** and management qualifications within the sector. For those who have been in the workplace for a long time, this qualification can be used in the recognition of prior learning process to assess and recognise workplace skills acquired.

Features & Benefits

- The qualification will also give you a recognized CAD software course, accepted by industry at the value of thousands of Rands, a critical consideration for any employer when considering new draughtsman.



- Get exposure to guest lecturers from relevant external companies and organizations both on-campus and online.
- Get job ready with our Workplace Preparation through a self paced module where you will learn how to compile your own personal work portfolio, enhance your CV, handle yourselves in a design job interview, how to be resourceful in job hunting and managing your online reputation.
- Students get free access to the MakersLab with **3D Printing, CNC Machining and Lazer Cutting** facilities.
- Get a free **Office 365 Education A1 license**, valid for the duration of your studies.



- Access to our online recruitment portal, exclusively available to **AIE graduates**. Visit www.recruitgraduates.co.za for more.



Admission Requirements

- Grade 12 with full Mathematics
- NQF 4 Drawing Office Practice OR
- N4/5 Multi Drawing Office practice OR
- Engineering National Certificate N3
- No matric?** You still have options. Do our Engineering National Certificate N3

Duration

Full-Time

- Full Time, Contact** (Hybrid) Learning, 24 Months, 257 credits
- Full Time, Online** Learning, 24 Months, 257 credits
- Classes conducted from Monday to Friday ± 12 hours/week

Part-Time

- Part Time, Flexi** Online Learning, 24 months, 257 credits
- Classes conducted after hours over 2-3 sessions/week (on selected Saturdays)

** Class structures are subject to change without notification.*

What you get

This qualification is designed to provide the student with multiple certificates and qualifications, both locally and internationally recognised by the industry for maximum employability.

On completion the student will earn:

- National Diploma:** Structural Steel Detailing, NQF Level 5, SAQA ID: 48636, 257 Credits
- International Certificate:** AutoCAD & Autodesk Advanced Steel

Theory Modules:

- **Module 1:** Use drawing equipment and apply drawing techniques to produce detail drawings of basic structural steelwork assemblies and arrangement drawings. Demonstrate understanding of regulations codes and drawing office practices for structural steel detailing. Prepare structural steelwork detail drawings for the fabrication of assemblies for light industrial structures low rise commercial buildings and warehouse. Prepare structural steelwork detail drawings for the fabrication of assemblies for ancillary steelwork for buildings. Demonstrate understanding of the mechanical properties of bolts set screws and welds and their application in the design of connections for structural steelwork assemblies.
- **Module 2:** Demonstrate an understanding of strength of materials in relation to steel structures. Demonstrate understanding of basic theory of structures and structural behaviour relative to steel structures. Use advanced 3D computer modeling techniques in the production of detail drawings and other data leading to the fabrication of commercial and industrial structural steel projects. Demonstrate an understanding of basic contract planning functions workshop and site procedures for structural steel projects. Prepare structural steelwork detail drawings for the fabrication of assemblies for multi-storey buildings
- **Module 3:** Design a range of load bearing elements for steel structures. Prepare structure steelwork detail drawings for the fabrication of assemblies for heavy industrial buildings. Engage in sustained oral communication and evaluate spoken texts. Demonstrate an understanding of framing of structural steel buildings and structural behaviour. Design structural steelwork connections. Prepare structural steelwork detail drawings for the fabrication of assemblies for process plants.
- **Module 4:** Read analyse and respond to a variety of texts. Use language and communication in occupational learning programmes. Represent analyse and calculate shape and motion in 2- and 3- Dimensional space in different contexts. Demonstrate an understanding of advanced theory of structures and structural behaviour relative to steel structures. Compile estimate and quotations for structural steelwork. Control quality in the fabrication assembly and erection of structural steelwork assemblies.

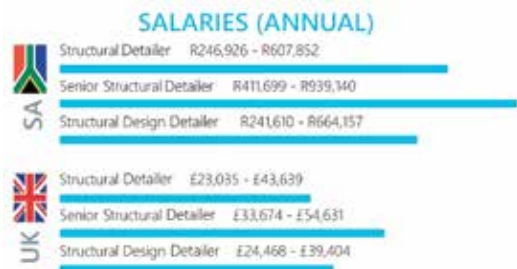
Software Modules:

- AutoCAD
- Autodesk Advanced Steel 

Workplace Preparation and Portfolio Compilation through a self paced Module

- Preparing for an interview;
- Conduct and Behaviour During an Interview;
- Communication Skills;
- Understanding Legislation;
- Preparing the CV that Everybody Wants to See;
- Using Social Media;
- Starting the Job seeking Journey
- Registering on our recruitment portal

Salaries & Skills



* All statistics are derived from www.payscale.com

Career Options

- Structural Steel Detailer
- Structural Draughtsperson
- Structural Engineer
- Senior Structural Engineer
- Structural Design Engineer
- Project Manager
- Estimator

Study Kit

Your study kit is included in your fees and will contain:



myAIE Student Portal

- **Free WIFI** (On-Campus only)
- **Autodesk student license** valid for 1 year.
- USB 32GB with all required software applications.
- Hardcopy of Red, Blue and Yellow steel books used in the industry
- Stationery kit that includes:
- AIE Notepad
- AIE Pencil Case (15 cm)
- AIE Ruler
- AIE Pen
- Clutch Pencil (0,3mm, 0,5mm, 0,7mm, 0,9mm)
- VR Goggles
- **Orientation kit including:** Student Card, Welcome Letter, Getting Started Guide.
- Access to myAIE student portal and student support team via phone, email and tickets.

*Please note that Autodesk Licenses provided are for Windows OS only and does not extend to Mac.

Mode of Delivery

- Full Time
- Part Time
- Online