



National Certificate: Multi Disciplinary Draughting (MDDOP N4/5)

Overview

Our **Multi-Disciplinary Draughting National Certificate** is one of the best, and most popular qualifications for a draughtsperson. It is the most recognised draughting qualification in the industry as well as the pre-requisite for any further studies in draughting. It will introduce you not only to the **fundamentals of draughting** but also your **draughting software tools** and numerous draughting disciplines such as **architectural, mechanical, structural**, process plant and many more. This qualification will also prepare you for the MDDOP N4/N5 National Examinations from the Department of Education.

Features & Benefits

- This multi-disciplinary approach provides a wide range of occupational options for optimal job market compatibility as it does not limit the student to a single discipline.
- It integrates multiple internationally recognised CAD software courses, accepted by industry at the value of thousands of Rands, a critically advantageous consideration for any employer during new hires.
- We utilise industry-leading **CAD/CAM/CAE** software including Autodesk, Solidworks and ArchiCAD ensuring that you are educated in industry used CAD software.

  

- Our **Digital Fabrication** modules and Virtual and Augmented Reality technology is incorporated into this program covering AR, VR, 3D Printing, CNC Machining and Lazer Cutting.

 

- Scarce industry skills such as Project Management, accredited by PMI (Project Management International) and others were added to further employment success and skills application.



- Get a free **Office 365 Education A1 license**, valid for the duration of your studies.



- Job placement assistance through our industry network and online recruitment portal.

 

Choose your software elective...

Choose a software elective of your choice, learn the latest in industry technology, such as **Virtual Reality, 3D Printing** and **CNC Machining** with a strong focus on project production and output for industry readiness.

MECH1 Mechanical & Digital Fabrication Specialization

Advanced 3D Software

- Autodesk Inventor
- Solidworks
-  
- Digital Fabrication**
- CNC Machining & Lazer Cutting
- 3D Printing Fundamentals
- Virtual (VR) & Augmented Reality (AR) Fundamentals

 

- Project Management Fundamental (PMI)**
- Final Integrated Project**
- Plan and execute your project

BUILD2 Building, Structural & Digital Fabrication Specialization

Advanced 3D Software

- Autodesk Revit Next Level (All disciplines)
- ArchiCAD
- Multidisciplinary & Integrated Project Coordination in BI Archicad
- Digital Fabrication**
- CNC Machining & Lazer Cutting (Physical model building)
- 3D Printing Fundamentals
- Virtual (VR) & Augmented Reality (AR) Fundamentals

Project Management Fundamental (PMI)

- Plan and execute your project
- Produce Data Packs, (drawings, registers, WBS's),
- Produce digital prototypes on the VR, 3D print and CNC cutting)

VIZ3 3D Visualization, Rendering & Animation Specialization

Advanced 3D Software

- 3D Max Essentials & Advanced Concepts.
- Virtual (VR) & Augmented Reality (AR) Fundamentals with 3D Max.

Digital Fabrication

- 3D Printing Fundamentals.
- Virtual (VR) & Augmented Reality (AR) Fundamentals.

Project Management Fundamental (PMI)

- Final Integrated Project
- Plan and execute your project.
- Produce Data Packs, (drawings, registers, WBS's)
- Produce digital prototypes on VR, 3D renders, animations.

Workplace Preparation and Portfolio Compilation

Duration

Full-Time, Hybrid Learning

- ±8 Months, +1 month specialization (Classes run Monday to Friday, 08:30 - 15:45)
- Learning is blended (combination of online & contact time)
- All hours are achieved via your study duration at the institute and project-based assignments

Part-Time, Hybrid Learning

- ±12 Months, +1 month specialization (3 Hours on Campus session - 2 x Week @ 18:00-21:00 / 6 Hours on Campus session - Every 2nd Saturday @ 08:00)

Online, Virtual Learning

- ±12 Months, +1 month specialization (Online live classes, 2 Hours a week, 18:00 - 21:00)

Admission Requirements

- Grade 12 with a drawing subject and Math Literacy
- **No drawing subject at school?** You can still apply but must go through our Technical Bridging Course first, done 1 week prior to the start of the draughting qualification.
- **No matric?** You still have options. Do our Engineering National Certificate N3

Articulation Options

On successful completion of this qualification, you can articulate into the following:

- National Diploma: Architectural Technology NQF5 at first year level.
- National Diploma: Structural Steel Detailing NQF5 at first year level.

What you get

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

On completion the student will earn:

- The AIE Multi-Disciplinary Draughting Certificate.
- N4/N5 MDDOP National Certificate Accredited by the Department of Higher Education and Training (Upon completion of the DOE exams).
- Autodesk Certified Training Center Certificate for each Autodesk course completed.

Curriculum

PART 1: Multi-Disciplinary Draughting CORE

During this part, all students will learn draughting techniques in various different industries as well as an array of industry recognized and utilized software. The below diagram explains the industries and software.

THEORY SUBJECTS	SOFTWARE SUBJECTS
<ul style="list-style-type: none"> Mechanical Drawing Office Orientation Building Draughting Mechanical Draughting Electrical Draughting Structural Steel Detailing Pictorial Draughting General Draughting Piping 	<ul style="list-style-type: none"> AutoCAD 2D Fundamentals AutoCAD Advanced 3D Modeling with Autodesk Fusion 360 AutoCAD Electrical AutoCAD P & ID Autodesk Inventor Essentials Autodesk Revit Architecture Advance Steel



PART 2: Software Electives (Choose one)

During this part each student will choose a specialized industry in which they would like to focus on. We cover more CAD applications specific to each industry as well as additional subjects like project management and BIM management.

Mechanical & Digital Fabrication Specialization	Building, Structural & Digital Fabrication Specialization	3D Visualization, Rendering & Animation Specialization
<p>Advanced 3D Software</p> <ul style="list-style-type: none"> Autodesk Inventor Advanced (Routed Systems, Sheet Metaling, Cable & Harnessing, Stress Analysis and Motion Simulation) Solidworks <p> AUTODESK INVENTOR SOLIDWORKS</p> <p>Digital Fabrication</p> <ul style="list-style-type: none"> CNC Machining & Laser Cutting 3D Printing Fundamentals Virtual (VR) & Augmented Reality (AR) Fundamentals <p> makerslab AIE Virtual Reality Lab</p> <p>Digital Fabrication Project Management Fundamental (PMI) Final Integrated Project</p> <ul style="list-style-type: none"> Plan and execute your project Produce Data Packs, (drawings, registers, WBS's), Produce digital prototypes on the VR, 3D print and CNC cutting) <p>Workplace Preparation and Portfolio Compilation</p> <ul style="list-style-type: none"> Preparing for an interview; Conduct and Behavior During an Interview; Communication Skills; Understanding Legislation; Preparing the CV that Everybody Wants to See; Using Social Media; Starting the Job seeking Journey 	<ul style="list-style-type: none"> Autodesk Revit Next Level (All disciplines) ArchiCAD Multidisciplinary & Integrated Project Coordination in BIM <p> AUTODESK REVIT GRAPHISOFT ARCHICAD</p> <p>Digital Fabrication</p> <ul style="list-style-type: none"> CNC Machining & Laser Cutting (Physical model building) 3D Printing Fundamentals Virtual (VR) & Augmented Reality (AR) Fundamentals <p> makerslab AIE Virtual Reality Lab</p> <p>Digital Fabrication Project Management Fundamental (PMI) Final Integrated Project</p> <ul style="list-style-type: none"> Plan and execute your project Produce Data Packs, (drawings, registers, WBS's), Produce digital prototypes on the VR, 3D print and CNC cutting) <p>Workplace Preparation and Portfolio Compilation</p> <ul style="list-style-type: none"> Preparing for an interview; Conduct and Behavior During an Interview; Communication Skills; Understanding Legislation; Preparing the CV that Everybody Wants to See; Using Social Media; Starting the Job seeking Journey 	<ul style="list-style-type: none"> 3D Max Essentials & Advanced Concepts. Virtual (VR) & Augmented Reality (AR) Fundamentals with 3D Max. <p> 3 AUTODESK 3DS MAX</p> <p>Digital Fabrication</p> <ul style="list-style-type: none"> 3D Printing Fundamentals. Virtual (VR) & Augmented Reality (AR) Fundamentals. <p> AIE Virtual Reality Lab</p> <p>Project Management Fundamental (PMI) Final Integrated Project</p> <ul style="list-style-type: none"> Plan and execute your project Produce Data Packs, (drawings, registers, WBS's), Produce digital prototypes on the VR, 3D print and CNC cutting) <p>Workplace Preparation and Portfolio Compilation</p> <ul style="list-style-type: none"> Preparing for an interview; Conduct and Behavior During an Interview; Communication Skills; Understanding Legislation; Preparing the CV that Everybody Wants to See; Using Social Media; Starting the Job seeking Journey

* Please note that AIE retains the right to change the structure of the course as and when needed.

Career Options

- Building Draughtsperson
- Mechanical Draughtsperson
- Piping Draughtsperson
- Civil Draughtsperson
- CAD Operator
- Electrical Draughtsperson
- Structural Draughtsperson

Study Kit

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



- Free WIFI** (On-Campus only)
- Autodesk student licenses** valid for 1 year.
- USB 64GB with all required software applications.
- Stationery kit that includes:
 - AIE Notepad
 - A4 Tracing pad
 - AIE Pencil Case (15cm)
 - AIE Ruler
 - AIE Pen
 - Uni Pin Fine Liner (0,3mm and 0,5mm)
 - A3 Sketchpad
- Orientation kit including:** Student Card, Welcome Letter, Getting Started Guide.
- Access to myAIE student portal and student support team via phone, email and tickets.

Mode of Delivery

- Full Time
- Part Time
- Online