AIE School of Draughting and Technical Design

National Certificate: Multi Disciplinary Draughting (MDDOP)

Overview

Our **Multi-Disciplinary Draughting National Certificate** is one of the best, and most popular qualification 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

1. 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.
2. 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.
3. We utilise industry leading **CAD/CAM/CAE** software including **Autodesk, Solidworks, ArchiCAD and SketchUp** ensuring that you are educated in industry used CAD software.

AUTODESK SOLIDWORKS ARCHICAD

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

AIE

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

PMI

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

MECH1	BUILD2	VIZ3
Mechanical & Digital Fabrication Specialization	**Building, Structural & Digital** Fabrication Specialization	**3D Visualization, Rendering** & Animation Specialization
Advanced 3D Software • Inventor Adcanced Solidworks Essentials + **Practical Software Project** AUTODESK INVENTOR SOLIDWORKS	**Advanced 3D Software** • Aurtdesk Revit (All) Archicad Essentials/ SketchUp (Choose one) • Multidiciplinary & Intergrated Project Coordination in BIM + **Practical Software Project** AUTODESK REVIT ARCHICAD	**Advanced 3D Software** • 3D Max Essentials & Advanced Concepts. • Virtual (VR) & Augmented Reality (AR) Fundamentals with 3D Max. AUTODESK 3DS MAX
Digital Fabrication • 3D Printing Fundamentals. • Virtual (VR) & Augmented Reality (AR) Fundamentals. AIE		**Virtual Reality** • Virtual (VR) & Augmented Reality (AR) Fundamentals. AIE

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
- +- 8 Months, +1 month specialization (Classes run Monday to Friday, 08:30 - 15:45)

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

Online Learning: +- 12 Months, +1 month specialization (Online live classes, 2 Hours a week, 18:00 - 20:00)

Mode of Delivery

- Full Time
- Part Time
- Online

Articulation Options

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

- Direct access into the National Diploma: Architectural Technology NQF5 at first year level.
- Direct access into the National Diploma: Structural Steel Detailing NQF5 at first year level.

Admission Requirements

- Grade 12 with a drawing subject and Math Literacy
- **No drawing subject at school?** You can still apply but you 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

Curriculum

PART 1: Multi-Disciplinary Draughting CORE
During this part all students will learn draughting techniques in various different industries as well as a array of industry recognized and utilized software. The below diagram explains the industries and software.

THEORY SUBJECTS	SOFTWARE SUBJECTS
• Drawing Office Orientation • Building Draughting • Mechanical Draughting • Electrical Draughting • Structural Steel Detailing • Pictorial Draughting • General Draughting • Piping Draughting	• AutoCAD 2D Fundamentals • AutoCAD Advanced • 3D Modeling with Autodesk Fusion 360 • AutoCAD Electrical • AutoCAD P & ID • Autodesk Inventor Essentials • Autodesk Revit Architecture

PART 2: Specializations (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
Advanced 3D Software • Autodesk Inventor Advanced (Routed Systems, Sheet Metaling, Cable & Harnessing, Stress Analysis and Motion Simulation) • Solidworks **Digital Fabrication** • CNC Machining & Lazer Cutting • 3D Printing Fundamentals • Virtual (VR) & Augmented Reality (AR) Fundamentals **Digital Fabrication** • **Project Management Fundamental (PMI) Final Integrated Project** • Plan and execute your project • Produce Data Packs, (drawings, registers, WBS's), • Produce digital prototypes on the VR, 3D print and CNC cutting) **Workplace Preperation and Portfolio Compilation** • 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	• Autodesk Revit Next Level (All disciplines) • ArchiCAD • Multidisciplinary & Intergrated Project Coordination in BIM **Digital Fabrication** • CNC Machining & Lazer Cutting (Physical model building) • 3D Printing Fundamentals • Virtual (VR) & Augmented Reality (AR) Fundamentals **Digital Fabrication** • **Project Management Fundamental (PMI) Final Integrated Project** • Plan and execute your project • Produce Data Packs, (drawings, registers, WBS's), • Produce digital prototypes on the VR, 3D print and CNC cutting) **Workplace Preperation and Portfolio Compilation** • 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	• 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 the VR, 3D print and CNC cutting) **Workplace Preperation and Portfolio Compilation** • 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

Career Options

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

Study Kit

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

- Free WIFI (unlimited data, On Campus only).
- Autodesk student licenses valid for three years.
- Stationary kit that includes Notepad, Sketchpad, A4 & A3 Paper and Tracing Paper
- Electronic Study Guides
- Orientation kit including: Student Card, Welcome Letter, Getting Started Guide.
- Access to myAIE student portal and student support team via phone, email and tickets.
- USB 64GB with all required software applications.
- AIE VR Cardboard Goggles

What you get

This qualification 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 Draughting Academy 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 Centre Certificate for each Autodesk course completed.

For more information, please
contact a student advisor:
Gauteng: 011 262 5115 | Cape Town: 021 202 7890
info@aie.ac | www.aie.ac