



# Fact Sheet

Computer Aided draughting  
and design (CAD2)



# Computer Aided draughting and design (CAD2)

## FACULTY OF DESIGN

### Vocational Studies: 2024 Fact Sheet

Programme Title	SAQA ID	Credits	NQF
FET Certificate: Computer Aided Drawing Office Practice (CAD)	66071	90	4

**\*Available for current students for 2nd year studies**

## Programme description

This Further Education and Training Certificate (FETC) is intended to serve the architectural, engineering, and construction industries by providing skilled draughtspersons who can produce design drawings that address the need to move from traditional manual drafting to Computer Aided Drawing and Draughting. Portability across other National Qualifications in Engineering and Draughting is therefore ensured. CAD 2 provides students who have completed CAD 1 the opportunity to complete additional Unit Standards to the value of 98 credits assigned to the FET Certificate: Computer Aided Drawing Office.

## Syllabus

The following modules are presented in CAD 2:

- ▶ C421: Construction 2A
- ▶ CA421: Computer Applications 2A
- ▶ DT421: Design Theory 2
- ▶ SW421: Studio Work 2A
- ▶ C422: Construction 2B
- ▶ SPM422: Specialisation Mechanical
- ▶ SPA422: Specialisation Architecture
- ▶ SW422: Studio Work 2B

### Construction 2A

The Purpose of this module is to introduce the student to the essential concepts and skills required for a Project Management role in the Construction Industry. The Construction management field is vast and very important in ensuring the smooth running of an Architectural Construction project. An essential skill for any Draftsman.

### Computer Applications 2A

During this module students engage with computer aided design principles and processes applied to mechanical, architectural and structural draughting. The use of computer aided design software results in the creation of two-dimensional drawings and threedimensional representations.

### Design Theory 2

The draughting industry is a well-established industry and thus many learners would benefit from qualifications aligned to this career path. The primary purpose of this qualification is to provide learners with competencies to enter the Computer Aided Draughting industry.

### Studio Work 2A

During this module students engage with computer aided design principles and processes applied to piping, mechanical, architectural and structural draughting. The use of computer aided design software results in the creation of two-dimensional drawings and three-dimensional representations.

### Construction 2B

During This module supplies students with a theoretical understanding of two different learning streams within an engineering context: Engineering materials and processes, fluids and hydraulics. Students acquire a fundamental understanding of theory presented. The module is set up to actively engage students through the use of a variety of resources, activities and group activities.

### Specialisation Mechanical

During this module, students advance their skills in working with Inventor - a software package intended for creating three dimensional representations of mechanical parts. Engagement with Inventor includes:

This module is divided into four learning units:

- ▶ The creation of parts
- ▶ Gathering information from existing rendered parts

During this module, students will predominantly engage with the following software package:

- ▶ AutoDesk Inventor

### Specialisation Architecture

During this module, students advance their skills in working with Revit - a software package intended for creating three dimensional representations of Architectural buildings. Engagement with Revit includes:

- ▶ The The creation of parts
- ▶ Gathering information from existing rendered parts.

During this module, students will predominantly engage with the following software package:

- ▶ AutoDesk Revit

### Studio Work 2B

This module consists of three predominant learning units, Structural Steel draughting, Electrical draughting and HVAC. The Structural Steel draughting learning unit is dedicated to the detailing and fabrication of steel profiles in accordance with standard industry practice.

## Admission requirements

The minimum entry requirement for this qualification for Computer Aided Draughting and Design 2:

- ▶ FET Certificate: Computer Aided Drawing Office Practice (CAD) (SAQA 66071, NQF 4, 131 Credits)
- ▶ Autodesk Certified User Literacy.

## Mode of study | Duration

**Day Classes** (full time): 12 Months (5 days/week)

**Evening Classes** (part time): 12 Months, (2 x evening classes per week, 18:00 - 21:00, Mon & Wed or Tues & Thurs as well as 2 x Saturday classes per month)

## Teaching and Learning Methodology

A blended teaching and Learning methodology is followed. All theory classes will be conducted Virtually through Lecturer-led interactive teaching on a national basis. A flipped classroom approach will be followed in some sessions. This means that students are introduced to content at home and practice working through it during the applicable session, either the virtual theory sessions or the practical sessions.

All students will be allocated to lecturers that are not necessarily based at the campus of enrollment but who will always be subject matter experts. CTU implements a national academic standard and all lecturers have been appointed on the same criteria and use the same academic content in the teaching and learning process. The adherence to a national academic standard is monitored by the Academic Management team at the Head office. Therefore, all students will continue to receive the same quality of education.

Students will attend some practical, group, and research sessions on campus or virtually. The same work and time will be spent on both methods, face to face and VLIT, with students. Extra practical sessions can be booked at the campus with the Campus Operational Manager. Students will be expected to attend practical, group, and research classes on campus a minimum of two days a week, as per the campus schedule.

## Textbooks and e-guides

A list of prescribed textbooks will be provided in your e-guides. Students will receive an electronic version of the academic guides (e-guides) for this programme on the Teaching and Learning platform. Access is available to an electronic library of textbooks on O'Reilly, and it is included in the fees. Refer to the [Device Specifications and Stationery List](#) document for more information.

## Technology hardware, software and data requirements

- ▶ A laptop preferably Core I5, RAM 8GB and above, 64 Bit Operating System x64 based processes and
- ▶ A minimum of 20GB data per month (uncapped recommended)

For additional information please consult the CTU Bring your own device guide. [Device Specifications and Stationery List](#)

## Student Support

Student support sessions with the facilitator will also take place on a one-on-one basis either virtually or physically at the campus per appointment or per the academic schedule.

## Certification

On successful completion and verification by the Quality Assurance Partner (QAP) of the programme, the student will receive a Further Education and Training Certificate: Computer-Aided Drawing Office Practice issued by the QAP - Construction Education & Training Authority (CETA).

**Note that the process of issuing a Certificate might take up to three years to be finalised.**

## International Certifications

- ▶ AutoDesk Certified Professional AutoCAD Professional
- Optional Exams: (\*for student's own account)**
- ▶ AutoDesk Certified Professional Revit Architecture
  - ▶ AutoDesk Certified Professional Inventor Professional

## Further studies

Students may pursue further studies at an accredited institution of Higher Education. Admission to further your studies at a different institution remains the prerogative of each institution and its academic council.

## Career fields

**Students can be employed in the following career fields:**

- ▶ Architectural / Civil Draughtsman
- ▶ Mechanical Draughtsman
- ▶ Building & Site Surveyor
- ▶ CAD Operator
- ▶ Architectural Detailer
- ▶ Mechanical Detailer
- ▶ Structural Steel Detailer
- ▶ Visual 3D Modeller and more...

## Pricing\*

Programme	Registration fees	Tuition fee
CAD 2	R9 000	R 75 438

**\* Excludes external fees and identified textbooks if applicable. \* Prices are subject to annual adjustments.**

## Payment

Visit our website to view the payment method.

[Payment Methods.](#)

[APPLY for Student Loan HERE!](#)

## Additional costs

Students must make provision for additional items such as textbooks, stationery, supplementary examinations, research costs and printing, field trips etc.



## Disclaimer

The information contained in this fact sheet is accurate at the time of printing. However, factors beyond the control of CTU Training Solutions (such as environmental, regulatory or technical changes) may cause the contents of this fact sheet or of the programme to change. In the event of any such change, CTU will notify current students. All possible measures will be taken to minimise inconvenience to students.

I (Name of student):..... hereby acknowledge that I understand the information stated in this document and fully comprehend the specifics explained above pertaining to this qualification.

Student signature:.....

Signature of legal guardian:.....

Name of legal guardian:.....

Consultant signature:.....

Name of sales consultant:.....

Date:.....

**\* Please note the original signed copy should be kept on the student record file.**

## CONTACT US

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