Accredited Africa Training Institute for Capacity Development
Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa
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COURSE BROCHURE

Solar Thermal Energy

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0481 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course provides participants with a comprehensive understanding of solar thermal energy systems, including their design, installation, and maintenance. It equips learners with the knowledge and skills to evaluate solar thermal technologies, assess site suitability, and implement sustainable energy solutions in residential, commercial, and industrial contexts.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0481
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply principles of solar thermal energy to design efficient systems for various applications.
- Analyze site conditions and energy requirements to determine the feasibility of solar thermal installations.
- Evaluate different solar thermal technologies and select appropriate components for specific needs.
- Demonstrate the ability to install, commission, and maintain solar thermal systems according to industry standards.
- Implement safety and environmental regulations in the installation and operation of solar thermal systems.
- Assess the economic and environmental impact of solar thermal projects using relevant metrics.

WHO SHOULD ATTEND

- This course is designed for engineers, technicians, energy consultants, project managers, and facilities managers who wish to specialise in solar thermal energy systems.
- It is also suitable for individuals seeking to enter the renewable energy sector.

COURSE OUTLINE

Day 1: **Fundamentals of Solar Thermal Energy**

- Introduction to solar energy and its potential in South Africa
- Principles of solar radiation and heat transfer
- Types of solar thermal collectors (flat-plate, evacuated tube, concentrating
- System components: collectors, storage tanks, heat exchangers, pumps, controllers
- Solar water heating systems: direct and indirect circulation
- System sizing and performance estimation
- Standards and regulations (SANS 1307, SANS 10106
- Environmental and economic benefits

Day 2: **System Design, Installation, and Maintenance**

- Site assessment and system design considerations
- Selection of collectors, storage, and auxiliary components
- Installation procedures, mounting, and piping
- Electrical and control wiring for pumps and sensors
- Commissioning and system testing
- Maintenance schedules, fault finding, and repair
- Health and safety regulations (OHS Act
- Integration with heat pumps and PV systems

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	**R 11,900.00**
1	In-House	R 16,100.00	**R 16,100.00**
1	On-Campus (Pretoria)	R 17,800.00	**R 17,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	02 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
01 Dec 2026	02 Dec 2026	On-Campus	Cape Town, South Africa
02 Dec 2026	03 Dec 2026	On-Campus	Shenzhen, China
02 Dec 2026	03 Dec 2026	On-Campus	Lagos, Nigeria
03 Dec 2026	04 Dec 2026	On-Campus	Durban, South Africa
08 Dec 2026	09 Dec 2026	On-Campus	Maseru, Lesotho
08 Dec 2026	09 Dec 2026	On-Campus	Kigali, Rwanda
08 Dec 2026	09 Dec 2026	On-Campus	Accra, Ghana

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0481) and click **Get A Quotation**. Select your training method and number of delegates — your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to **apply@aaticd.co.za** — our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically — the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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