

Course Information and Policies

Stand Alone Power Systems – Design Only

We at GSES send you a warm welcome and thank you for choosing us.

This document contains important information about your course and relevant GSES policies. Please contact the GSES office on 02 9024 5312 if you have any questions or concerns regarding the content.

1 Course Details

This course is designed for engineers or those who have equivalent basic electrical knowledge and wish to further their skills by also being able to design stand-alone photovoltaic power systems. The course can be undertaken by electricians who only want to design and not install systems.

This course is available in three variants, termed “Fast Track” “GCPV Accredited” and “Full Course” in this document. You will enrol in only one of these variants, so please ensure you refer to the correct sections.

Under each course variant, there are two pathways – nationally recognised training (NRT) and non-nationally recognised training (non-NRT). You will enrol in only one of these pathways, so please ensure you refer to the correct sections.

Nationally recognised training (NRT)

This pathway can be taken by course participants who meet the required prerequisites for nationally recognised training. Successful completion of this pathway leads to a Statement of Attainment.

Non-nationally recognised training (non-NRT)

This pathway can be taken by course participants who do NOT meet the required prerequisites for nationally recognised training. Successful completion of this pathway leads to a Certificate of Completion.

1.1 Prerequisites

1.1.1 Nationally recognised training (NRT)

This NRT pathway is intended for anyone who wishes to get accreditation from Solar Accreditation Australia (SAA). Course participants must demonstrate one of the following prerequisites to enrol in this course:

- Statement of Attainment in UEERE0051 – Apply electrical principles to renewable energy design;
- Statement of Attainment in UEEEL0039 – Design, install and verify compliance and functionality of general electrical installations; or
- Unrestricted electrical licence issued by an Australian state or territory.

1.1.1.1 Full Course

There are no additional prerequisites for this course variant.

1.1.1.2 GCPV Accredited

This course variant builds on the knowledge of the Grid-Connected PV Systems Design Only course, so a prerequisite for enrolment is a Statement of Attainment in one of the following combinations of Units of Competency:

- UEERE0061 – Design grid-connected photovoltaic power supply systems; or
- Both of:
 - UEERE0022, UEENEEK125A, UEENEEK025C, or UEENEEK025B – Solve basic problems in photovoltaic energy apparatus and systems; and
 - UEERE0011, UEENEEK135A, UEENEEK035C, or UEENEEK035B – Design grid-connected photovoltaic power supply systems

1.1.1.3 Fast Track

This course variant builds on the knowledge of the Grid-Connected PV Systems Design Only course and the Grid-Connected Battery Storage Systems Design Only course, so the prerequisites for the GCPV Accredited variant specified in 1.1.2 must be met in addition to a Statement of Attainment in one of the following Units of Competency:

- UEERE0060 – Design grid-connected battery storage systems; or
- UEERE5001 – Design battery storage systems for grid-connected photovoltaic systems

1.1.2 Non-nationally recognised training (non-NRT)

This non-NRT pathway is intended for anyone who does not hold the formal prerequisites to enrol in the NRT pathway, and those who do not wish to get SAA accreditation.

Course participants who do not hold the required prerequisites can also enrol in the non-NRT pathway, however, the course assumes a basic level of competence in electrical design, such as skills and knowledge attained in university-level electrical engineering subjects, or core units of competency included in the electrician qualification. Students who do not have prior experience with electrical principles should first enrol in the *UEERE0051 Apply electrical principles to renewable energy design* course.

1.1.2.1 Full Course

There are no formal prerequisites for this course variant.

1.1.2.2 GCPV Accredited

This course variant builds on the knowledge of the Grid-Connected PV Systems Design Only course, so students must be able to demonstrate knowledge in Grid-Connected PV Systems Design via SAA accreditation, or completion of a course that has historically been accepted as a training pathway for the same accreditation.

1.1.2.3 Fast Track

This course variant builds on the knowledge of the Grid-Connected PV Systems Design Only course and the Grid-Connected Battery Storage Systems Design Only course, so students must be able to demonstrate knowledge in Grid-Connected PV Systems Design and Grid-Connected Battery Storage Systems Design via SAA accreditation, or completion of a course that has historically been accepted as a training pathway for the same accreditation.

1.1.3 General notes

This course has heavy use of computer, calculator and mathematical equations. For this reason, it is strongly recommended that all students (NRT or non-NRT) have prior knowledge of mathematics, as well as computer and calculator skills.

1.2 Training Outcome

1.2.1 Nationally recognised training (NRT)

Successful completion of this course via the NRT pathway will result in the award of a **Statement of Attainment** in the current version of the following Units of Competency:

- UEERE0055 – Conduct site survey for off-grid photovoltaic/generating set systems; and
- UEERE0063 – Design off-grid photovoltaic/generating set systems

Upon successful completion of the course, students will be eligible to apply Solar Accreditation Australia for the Design of Stand-alone Power Systems Accreditation.

When your course is completed, and all requirements have been met including identity verification, licensing verification and Unique Student Identifier (USI) as required by the Australian Government, you will be issued with certification within fourteen (14) days.

1.2.2 Non-nationally recognised training (non-NRT)

Successful completion of this course via the non-NRT pathway will result in the award of a **Certificate of Completion** equivalent to the following Units of Competency:

- UEERE0055 – Conduct site survey for off-grid photovoltaic/generating set systems; and
- UEERE0063 – Design off-grid photovoltaic/generating set systems

This certificate will NOT allow students to apply for SAA accreditation.

When your course is completed, and all requirements have been met, you will be issued with certification within fourteen (14) days. As this is a non-NRT pathway, the training outcomes from this course will NOT appear on your USI VET (vocational education and training) transcript.

1.2.3 General notes

Solar Accreditation Australia has information on their website indicating their requirements to apply for accreditation: <https://saaaustralia.com.au/about-accreditation>.

Note that GSES cannot guarantee successful completion of this course, which is dependent on the effort of the individual student. GSES assesses the Language, Literacy and Numeracy skills of students upon enrolment and may offer a refund to students whose results are below the levels recommended for successful completion of the course. GSES does not provide entry level Vocational Education Training (VET) sector training.

When your course is completed, and all requirements have been met, you will be issued with certification within fourteen (14) days.

1.3 Delivery Method and Duration

This course is delivered online at students' own pace. The Stand Alone Power Systems Design Only course is nominally 120 hours of training, including the online assessments and design task. Students may take more or less time than this to complete the course. The work may be completed at any time during the student's enrolment period, which is valid for twelve (12) months. Please refer to Section 3.1 for more details on course validity.

GSES has a team of tutors who mark the online work and as necessary supply feedback or additional technical information to the students. GSES's tutors are also available to be contacted by phone (02 9024 5312) during business hours or email (tutor@gses.com.au).

1.4 Materials and Equipment

Students are supplied with a copy of the GSES publication *Stand Alone Power Systems: Design and Installation 8th Edition* as part of enrolment. This publication is an online-only e-book that can be accessed on the GSES online training platform. You will be given access to the textbook through the GSES training platform with an account linked to your email.

You may not have access to the textbook whenever our online training platform is down, for example during maintenance outages. You will retain access to this version of the e-book even after the expiry of your access to this course.

You can opt to get a **printed hardcopy** of the publication at an extra cost on top of the course price. This option will be available to you when you are purchasing the course.

Students will require a current copy of the following standards:

- AS/NZS 5033 - Photovoltaic arrays
- AS/NZS 4777.1 - Grid connection of energy systems via inverters
- AS/NZS 4509.1 - Stand Alone Power Systems - Safety and installation
- AS/NZS 4509.2 - Stand Alone Power Systems - System design
- AS/NZS 5139 - Electrical installations - Safety of battery systems for use with power conversion equipment
- AS/NZS 3010 - Electrical installations - Generating sets
- AS/NZS 3000 - Wiring Rules
- AS/NZS 3008.1.1 - Electrical installations - Selection of cables

These are not supplied by GSES; they can be purchased from the Standards Australia, Techstreet or SAI Global websites (<https://store.standards.org.au>, www.techstreet.com or infostore.saiglobal.com/store) and may be available at some libraries. TAFE students or members of NECA or Master Electricians may be able to access the standards through their respective institutions.

The following standards are not required, but are recommended reading:

- AS/NZS 2676.1 - Guide to the installation, maintenance, testing and replacement of secondary batteries in buildings - Part 1: Vented cells

- AS/NZS 2676.2 - Guide to the installation, maintenance, testing and replacement of secondary batteries in buildings - Part 2: Sealed cells
- AS/NZS 3011.1 - Electrical installations - Secondary batteries installed in buildings - Part 1: Vented cells
- AS/NZS 3011.2 - Electrical installations - Secondary batteries installed in buildings - Part 2: Sealed cells
- AS/NZS 3017 - Electrical installations - Verification guidelines
- AS/NZS 3100 - Approval and test specification – General requirements for electrical equipment

Due to the online nature of the course platform, students will require access to a computer and the Internet in order to complete the course. Students will also need a scientific calculator, and access to Microsoft Excel or OpenOffice Calc (freeware) spreadsheet program is recommended.

2 Student Rights and Responsibilities

2.1 Code of Practice

As a registered training organisation (RTO) GSES complies with the Standards set out by the regulator, the Australian Skills Quality Authority (ASQA), for Vocational Education Training (VET).

GSES will inform students within thirty (30) days of any changes to the RTO ownership or to third-party arrangements.

GSES will provide students a minimum thirty (30) days' notice of any changes to education and support services. Changes in education may refer to additional courses material and/or assessment to reflect changes in Australian Standards, units of competency, and/or other changes within the solar industry.

GSES does not countenance discrimination of any kind in the workplace. We wish to provide a safe and comfortable place of work.

2.2 Behaviour

GSES maintains an adult workplace. We do not countenance any behaviour that is contrary to safe work practice. We do not countenance inappropriate language in all forms of communication. GSES asks that all persons treat others with respect.

2.2.1 Cheating and plagiarism

Cheating will not be tolerated. If detected, sanctions may be implemented at the discretion of GSES.

Students are required to ensure that all responses and/or work they submit is their own work. Any referenced material should be annotated as to its origin. Sanctions may be implemented at the discretion of GSES if plagiarism or fraud is detected, including revocation of certification.

2.3 Complaints and Appeals

GSES has a policy of treating all complaints quickly and professionally. GSES welcomes your feedback.

We ask that you first seek to resolve any issue with the GSES staff person who is providing the service. If you are unsure with whom you need to raise your issue, please:

- Email training@gses.com.au
- Call 02 9024 5312
- Write to GSES at Suite 301/191 Botany Rd, Waterloo NSW 2017

We will attempt to resolve your complaint within ten (10) working days.

2.3.1 Complaints involving GSES staff, contractors, third-party service providers, or other students

If you cannot resolve the complaint informally with a staff member, you may lodge the complaint in writing with the RTO Chief Executive Officer (CEO) at rto.ceo@gses.com.au. With your permission the CEO or senior manager will respond in writing within ten (10) working days. We may need to separately interview all involved parties to ensure procedural fairness.

If the complaint is not able to be finalised within sixty (60) calendar days, the CEO or senior manager will notify you of the reasons for this in writing, and regularly update you on the process. If the complaint is unable to be resolved internally, you may request a review by a third-party independent mediator registered with the Australian Mediation Association. The mediation fees will be at the complainant's cost, unless otherwise approved by the CEO or senior manager.

2.3.2 Complaints and appeals of training and assessment results

All GSES course participants have the right to appeal the results they obtain in assessments and examinations. The appeal should be sent in writing to the RTO Chief Executive Officer (CEO) at rto.ceo@gses.com.au who will review the result and respond in writing within ten (10) working days.

If the appeal is not able to be finalised within sixty (60) calendar days, the CEO or senior manager will notify you of the reasons for this in writing, and regularly update you on the process. If you are unhappy with the result of the appeal, you have the right to engage a suitably qualified independent assessor. The external assessment fees will be at the complainant's cost, unless otherwise approved by the CEO or senior manager.

2.4 Student Records

Your records are accessible in your online course. GSES urges you to keep copies of all your work until the course is completed and certificate issued.

3 Cancellation and Refunds

Cancellation of online training courses will be subject to the following conditions:

- If the student's Learning, Literacy and Numeracy (LLN) levels are determined by GSES to be below the standard required to complete the coursework successfully, and the student has not yet submitted coursework for assessment, GSES may offer a full refund of the online course material and practical training component. If the student then opts to continue with the course, the standard cancellation and refund policy applies.

- Cancellation of online training courses made *within fourteen (14) days* of the date of payment AND *before the online course has been accessed*: the student will receive a full refund of the online course payment.
- Cancellation of online training courses made *within fourteen (14) days* of the date of payment AND *after the online course has been accessed* AND *before any coursework has been submitted for assessment*: the student will receive a refund of the online course payment **less a cancellation fee of \$440**, unless the value of the course is lower than this, in which case the student will receive *no* refund.
- Cancellation *more than fourteen (14) days* after the date of payment OR *after the first coursework is submitted for assessment* (whichever occurs first): the student will receive *no* refund.
- All course refunds are **exclusive** of the price of the supplied course publication as advertised at the time of enrolment, unless the publication is returned to GSES in an undamaged and unused condition. GSES reserves the right to refuse a refund of the publication on the basis that goods are damaged or have been used prior to return.

3.1 Course Validity

Courses are valid for twelve (12) months from the date on which enrolment is finalised, therefore the course must be completed within the expiry date given at the time of enrolment. If any extensions are required after the course expiry date, a monthly administration fee will be incurred to extend the course. Extension fees apply from the date of expiry, and the maximum extension permitted is six (6) months from the date of expiry. After this time (i.e. eighteen (18) months from enrolment), students must be re-enrolled into a new course if intending to continue. Standard enrolment fees will apply in this situation, and Recognition of Prior Learning (RPL) may be available for an additional fee.

If a cancellation/extension/change of date is required, please email or telephone GSES at training@gses.com.au or 02 9024 5312.

4 Recognition of Prior Learning (RPL)

In accordance with the Australian Quality Framework, GSES is committed to providing a quality recognition process to all students that is:

- Fair
- Flexible
- Reliable
- Valid

GSES will on request engage in a recognition of prior learning evaluation. GSES does not offer entry level VET sector training.

4.1 RPL Procedure

If a Unit of Competency (UOC) has been completed as part of an earlier taught course, that UOC will be evaluated to determine if there are any gaps in the previous training and any required training will be provided as part of a higher level or new course.

Should the participant seek RPL, an appropriately skilled staff member will assess the participant's competence against the performance criteria or learning outcomes of the unit or session.

GSES advocates a consultative approach to assessing both prior and current competencies through planning, implementing and evaluating the process.

Participants who are dissatisfied with the outcome of a recognition process are able to lodge an appeal through GSES's Customer Complaints and Appeals process, and participant feedback regarding the recognition process is used as a valuable mechanism to continually improve the process.

Where competence is not established, the applicant will be informed on the training solution that can be offered to prove this competence.

4.2 Cost of RPL

Fees for RPL evaluation will vary based on the extent of assessment and administrative services required. A simple credit transfer will typically incur a once-off administration fee, while a full RPL procedure may be billed at an hourly rate.

4.3 SAPS-Specific RPL

4.3.1 GCPV Accredited

RPL for some components of the following Units of Competency have been applied to this course variant:

- UEERE0061 – Design grid-connected photovoltaic power supply systems
- UEERE0022, UEENEEK125A, UEENEEK025C, or UEENEEK025B – Solve basic problems in photovoltaic energy apparatus and systems
- UEERE0011, UEENEEK135A, UEENEEK035C, or UEENEEK035B – Design grid-connected photovoltaic power supply systems

By providing evidence of their completion of these units, students are granted this RPL automatically at no cost, and do not need to apply separately for RPL based on the above units if they have enrolled in the GCPV Accredited variant.

4.3.2 Fast Track

In addition to the course adjustments specified in 4.3.1, RPL for some components of the following Units of Competency have been applied to this course variant:

- UEERE0060 – Design grid-connected battery storage systems
- UEERE5001 – Design battery storage systems for grid-connected photovoltaic systems

By providing evidence of their completion of these units, students are granted this RPL automatically at no cost, and do not need to apply separately for RPL based on the above units if they have enrolled in the Fast Track variant.

5 Intellectual Property

The material on the GSES website is subject to copyright as are the written materials supplied with the GSES name on them.

6 Disclaimer

All material and information provided by GSES is in good faith and is believed to be accurate and current at the date of publication. GSES endeavours to inform all stakeholders of any change in applicable regulations, codes of practice, or standards.

GSES will not be liable for computer viruses or damage resulting from the accessing of third-party websites.