



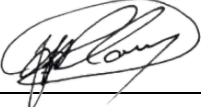
**ADVENTURE
INDUSTRY
ASSOCIATION**

Operating Adventure Quad Bikes and Side by Sides in Off-road Conditions - Courses Curriculum

Approval page

The signatories hereof, being duly authorised thereto, by their signatures hereto authorise the execution of the work detailed herein, or confirm their acceptance of the contents hereof and authorise the implementation/adoption thereof, as the case may be, for and on behalf of the parties represented by them.

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1 Introduction

1.1 Aim

This curriculum provides the skills development partner (instructional designer, developer, facilitator and assessor) with the information and guidance necessary in terms of the following:

- a. purpose of this course;
- b. target group;
- c. prerequisites for the course;
- d. course duration;
- e. learning outcomes;
- f. critical cross-field outcomes;
- g. sequence of learning events;
- h. training delivery;
- i. assessment; and
- j. course evaluation.

1.2 Background

The South African Quality Authority (SAQA) unit standards applicable to operating four-wheel drive (4WD) vehicles were made dormant by SAQA/Transport Education and Training Authority (TETA) and the validity of the two unit standards will not be extended. The Quality Council for Trades and Occupations (QCTO) is not currently considering the replacement of the two unit standards listed below.

- a. **Unit standard 254135:** apply the techniques for operating four wheel drive (4WD) vehicles in on-road and off-road conditions.
- b. **Unit standard 254154:** apply advanced techniques for operating four wheel drive (4WD) vehicles in on-road and off-road conditions.

Due to the need for primarily recreational quad bike and side by side driver training in the adventure tourism industry, the South African Adventure Industry Association (SA AIA) decided to establish quad bike and side by side driver training curricula for its members. This is important because there is a definite need for standardised quad bike and side by side driver training.

It will also make it easier for SA AIA to maintain its own technical competence framework and keep it up to date and in line with industry trends and requirements.

1.3 Scope

This curriculum applies to adventure quad bikes and side by sides. When developing course material, the skills development partner (instructional designer, developer, facilitator and assessor) will adapt the curriculum requirements to suit the requirements of adventure quad bikes or side by sides.

The SA AIA courses for operating quad bike and side by side vehicles in off-road conditions are listed below.

- a. Introduction to techniques for operating quad bike and side by side vehicles in on-road and off-road conditions course.
- b. Basic techniques for operating quad bike and side by side vehicles in on-road and off-road conditions course.
- c. Advanced techniques for operating quad bike and side by side vehicles in on-road and off-road conditions course.

2 Purpose of the SA AIA courses

The aim is to prepare and equip owners and drivers of quad bike and side by side vehicles for the safe and responsible use of quad bike and side by side vehicles and equipment in South Africa.

3 Target groups

The members of these learner target groups will typically have the following profile:

- a. no previous or very little knowledge of legislation associated with off-road riding;
- b. no previous or very little knowledge of configurations, capabilities and limitations of quad bike and side by side vehicles;
- c. no previous or very little experience in quad bike and side by side vehicles in off-road conditions;

The customer base associated with these target groups is identified below.

- a. **Commercial** – Government organisations and companies that are legally and/or professionally obliged to provide training to their

employees. This also applies to individuals who require the necessary skills to use a quad bike and side by side vehicles as part of their duties, such as medical professionals, engineers, construction workers, tourism professionals, etc.

- b. **Recreational** – private individuals that buy a quad bike and side by side vehicles for recreational purposes. “Original equipment manufacturer (OEM) accredited training” with the focus on customers that buy quad bike and side by side vehicles is also included here.

4 Prerequisites for the courses

The prerequisites for the courses are identified below.

- a. Introduction to techniques for operating quad bike and side by side vehicles in on-road and off-road conditions
 - i. Learner must be able to communicate at NQF Level 2 in English.
- b. Basic techniques for operating quad bike and Sid-by-side vehicles in on-road and off-road conditions – Learner must have completed the Introduction to techniques for operating quad bike and side by side vehicles in on-road and off-road conditions successfully.
- c. Advanced techniques for operating quad bike and side by side vehicles in on-road and off-road conditions - Learner must have completed the Basic techniques for operating quad bike and side by side vehicles in on-road and off-road conditions successfully.

5 Courses durations

The durations of the courses are identified below. These include classroom time (theory), practical time (practical demonstrations, driving and recoveries), time spent on self-study and assessments (time spent on formative assessments as well as preparation time for the summative assessments where applicable).

- a. Introduction to techniques for operating quad bike and side by side vehicles in on-road and off-road conditions - 6 hours (typical 1 hour theory and 5 hours practical)
- b. Basic techniques for operating quad bike and side by side vehicles in on-road and off-road conditions - 6 hours (typical 1 hour theory and 5 hours practical)

- c. Advanced techniques for operating quad bike and side by side vehicles in on-road and off-road conditions - 10 hours (typical 2 hours theory and 8 hours practical)

6 Learning outcomes

Outcomes are the end products of learning that the learners strive to achieve at the end of a learning intervention in order to acquire the knowledge, skills and attitude to perform designated tasks. The learning modules, sections, units and outcomes for the courses are indicated in the paragraphs below.

Bloom's taxonomy is used in this curriculum to define outcomes and it provides a way to express learning outcomes in a way that reflects cognitive skills.

Below is a summary of Bloom's taxonomy principles used.

- a. The following 6 levels (lowest to highest cognitive skills) are used:
 - i. knowledge/remembering;
 - ii. comprehension/understanding;
 - iii. application/applying;
 - iv. analysis/analysing;
 - v. evaluation/evaluating; and
 - vi. synthesis/creating.
- b. Bloom's taxonomy is used to identify verbs to describe learners' learning. Examples of learning outcomes might include the following:
 - i. knowledge/remembering: define, list, recognise;
 - ii. comprehension/understanding: characterize, describe, explain, identify, locate, recognise, sort;
 - iii. application/applying: choose, demonstrate, implement, perform;
 - iv. analysis/analysing: analyse, categorise, compare, differentiate;
 - v. evaluation/evaluating: assess, critique, evaluate, rank, rate; and

- vi. synthesis/creating: construct, design, formulate, organise, synthesise.

6.1 Introduction to techniques for operating quad bike and side by side vehicles in off-road conditions course

The learning modules, sections, units and outcomes for this course are indicated in the table below.

Table 1: Introduction to techniques for operating quad bike and side by side vehicles in off-road conditions course - learning modules, sections, units and outcomes

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcomes
1	General	1.1	General	1.1.1	Background information	1. Off-roading is the recreation of driving or riding a vehicle on unsurfaced roads or tracks made of materials such as sand, gravel, riverbeds, mud, snow, rocks and other natural terrain. 2. Background to current off-road legislation. Need for legislation. Current off-road legislation. Implications of current legislation. 3. Driver competency. 4. Not all insurance companies cover off-roading as part of their normal insurance policies (local and abroad). 5. Medical aid when travelling abroad.	1. Identify what is off-roading. 2. Identify the current South African legislation associated with off-roading. 3. Identify the trail grading system used in South Africa and explain how it relates to the technical difficulty of an off-road trail. 4. Identify the short-term insurance implications when driving off-road. 5. Identify medical aid implications when driving off-road.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcomes
		1.2	Riding gear	1.2.1	Basic Riding gear.	1. Importance of riding gear to protect the rider. 2. Knowledge of checking safety standards on riding gear. 3. Understanding uses and limitations of riding gear.	1. Understanding why riding gear is important and why it should be worn at all times. 2. Understanding why the price of riding gear differs so drastically and understanding the different safety standards of riding gear. 3. Understanding what gear to use, when and where.
2	Vehicle	2.1	Vehicle	2.1.1	Know your vehicle	1. Identify the major components and understand the basic working of a quad bike and side by side vehicles when driving off-road.	1. Identify the range of features, vehicle options and capabilities of the learner's quad bike and side by side vehicles. 3. Identify the differences between the different weight specifications of a vehicle (e.g. tara, gross vehicle weight [GVW], etc.). 5. Identify the effect of packing weights and packing strategy (heavy and light items) on the roll-over angles of the vehicle. 6. Identify the importance of securing all loose items in and on the vehicle. 7. Identify the limitations of an quad bike and side by side

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcomes
							vehicles in terms of angles, width, height, weight, ground clearance and wading (fording) depth. 9. Identify preparations for river/water crossings with the implications thereof.
				2.1.2	Vehicle preparation for off-roading	Vehicle preparation for off-roading to ensure that the vehicle is ready for off-roading.	Identify the preparation of a vehicle for off-road conditions considering the outcomes of learning unit 2.1.1.
3	Riding skills	3.1	Riding skills	3.1.1	Tyres	Tyre pressure is critical for successful off-roading. The correct tyre pressure for a vehicle depends on its type, the type of tyres fitted, their specifications, the vehicle's load and the road, trail or terrain to be driven on.	Identify correct tyre pressures considering the road/trail/terrain for the tyres fitted and the vehicle's load and the road, trail or terrain to be driven on.
				3.1.2	Riding obstacles	When riding off-road, the learner should be familiar with how to manoeuvre his/her vehicle on all types of terrain and in a variety of conditions.	1. Demonstrate the correct seating position as well as the position of the hands on the handle bars or steering wheel. 2. Demonstrate correct lines when negotiating cross-axle obstacles. 3. Demonstrate correct riding of ascents and descents.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcomes
							4. Demonstrate correct riding of side slopes.
				3.1.3	Weight distribution	When riding any quad bike and side by side, it is important to understand the impact your weight has on the drivability of the vehicle.	1. Demonstrate the full understanding of how to move your body to be able to use the quad/side by side to its full potential. 2. Understand how little the input has to and needs to be to keep the quad/side by side under control.
				3.1.4	Braking	When riding a quad bike it is important to understand why a quad bike's brakes are split. When driving a side by side it is important to understand how braking impacts the drivability of the side by side.	1. The learner must demonstrate an understanding of the difference between the front and the rear brake. 2. The learner must understand when to use which brake. 3. The learner must be able to keep the vehicle under control when coming to an emergency stop.
4	Recovery	4.1	Recovery equipment	4.1.1	Recovery equipment	It does not matter how experienced one is, at some stage one will get stuck in an obstacle while riding off-road. It is important to be prepared, have the correct recovery equipment on a vehicle and know how to use it correctly.	1. Identify recovery equipment. 2. Identify the different recovery methods and equipment. 3. Identify the ratings on recovery equipment and the importance thereof.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcomes
				4.1.2	Tyre pressure	Tyre pressure is critical for successful off-roading. The correct tyre pressure for a vehicle depends on its type, the type of tyres fitted, their specifications, the vehicle's load and the road, trail or terrain to be driven on.	1. Demonstrate the use of a tyre pressure gauge. 2. Demonstrate the use of an air compressor.
				4.1.4	Required tools	Some thought should go into what tools will be needed in an off-road toolbox. The aim is to have enough on hand to put one in a position to repair the vehicle if it fails during the off-road trip in order to get back on the road.	1. Demonstrate the use of the wheel spanner of the learner's vehicle. 2. Identify the tools required to perform basic maintenance on the learner's vehicle.
				4.1.5	Safety equipment	In order to enjoy the off-roading experience, take along the necessary safety equipment to make sure that your off-roading does not end in a nightmare experience. Also know how to use the safety equipment.	1. Identify the requirement for a first aid kit. 2. Identify the requirement to have sufficient drinking water in the vehicle. 3. Identify the requirement for a fire extinguisher.

Note: The trail grading, types of terrain covered (e.g. sand, gravel, riverbeds, mud and snow) and recovery procedures and equipment used during facilitation and assessments must be clearly stated. This information must be included on the learner's certificate.

6.2 Basic techniques for operating quad bike and side by side vehicles in off-road conditions

The learning modules, sections, units and outcomes for this course are indicated in the table below.

Table 2: Basic techniques for operating quad bike and side by side vehicles in off-road conditions course - learning modules, sections, units and outcomes

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
1	Vehicle	1.1	Vehicle	1.1.1	Know your vehicle	1. Identify the major components and understand the basic working of a quad bike and side by side vehicles when riding off-road. 2. The writing that one sees on the sidewall of tyres has two main purposes. The first is to help identify the size and specification of the tyres correctly. The second is to confirm that the tyre has been tested and approved to European and other country safety standards.	1. Identify the configurations of the learner's vehicle in term of riding modes, if applicable. 2. Identify the drivetrain components of the learner's vehicle in terms of engine, clutch, gearbox, drive shafts/chain and wheels. 3. Identify the types of tyres, markings on sidewall of tyres with emphasis on speed and load ratings. 4. Identify vehicle options in terms of quad bike and side by side vehicles and the limitations of these options. 5 Identify the different types of vehicle suspensions (e.g. electronic, mechanical, independent and dependant etc.). 6 Identify the off-road aids available in the learner's vehicle, such as traction control modes, ABS modes, riding modes, diff-locks and when to use what off-road aid in the vehicle.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
							7. Identify the limitations of a quad bike and side by side vehicles in terms of angles, width, height, weight, ground clearance and wading (fording) depth.
				1.1.2	Vehicle preparation for off-roading	Vehicle inspections are very important with regard to off-roading to ensure that the vehicle remains technically in an operational condition.	Identify the inspections of a vehicle before, during and after riding off-road.
2	Driving skills	3.1	Driving skills	2.1.1	Operate a quad bike and side by side vehicles in off-road conditions	1. When riding off-road, the learner should be familiar with how to manoeuvre his/her vehicle on all types of terrain and in a variety of conditions. 2. Understand when to select the various configurations and driving aids of the vehicle 3. Understand the procedure(s) to select the various configurations and driving aids of the vehicle. 4. Heading uphill is tough. Descending downhill if you did not make it can be even tougher. The correct procedure must be followed.	1. Demonstrate different riding approaches on-road, gravel and off-road. 2. Demonstrate when to use what off-road aid in the vehicle. 3. Demonstrate descending hills on failed climbs (emergency hill start recovery).
				2.1.2	Environmental impact	1. Be aware of the damage that can be caused to the environment.	Identify the environmental impact of off-road riding and how to minimise the impact thereof.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
						2. Behaviour in the wild, and specifically in eco-sensitive areas, will determine whether this wonderful lifestyle will be available in future. When off-road riding is done responsibly, it has minimal impact on the environment.	
				3.1.3	Weight distribution	1. When riding a quad bike and side by side, it is imperative to understand how your body's weight works with the vehicle's weight. 2. To be able to control a quad bike/side by side you need to understand how to manipulate your weight while riding.	1. The learner must understand that the rider's weight must only be on the footpegs or on the seat. 2. The learner must understand how to clamp onto the bike, either with their knees, calves or ankles. 3. The learner must understand that their weight is at their hips and must thus move their hips in the desired direction to keep control of the vehicle. 4. The learner must understand that they must keep their weight to the inside of the corner and to the incline of the hill.
				3.1.4	Braking	1. When riding it is important to be able to use the brakes to manipulate the weight of the Quad bike. 2. For the Side by side, the learner must understand that the vehicle is much lighter than a car and thus the front wheels must stay in the direction that moment is taking the vehicle, while	1. The learner must be able to demonstrate and understand how to use the brakes to manipulate the weight of the bike. 2. The learner must be able to lock up the rear wheel and be in control of the bike while doing so.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
						braking. This is to keep control of the vehicle.	
3	Recovery	3.1	Recovery equipment	3.1.1	Recovery equipment and techniques	1. It does not matter how experienced one is, at some stage one will get stuck in an obstacle while riding off-road. It is important to be prepared, have the correct recovery equipment on a vehicle and know how to use it correctly. 2. Lifting a motorbike up correctly after a fall is a very important skill. Firstly, to be able to assess yourself, to make sure you are ok, and to be able to pick up the bike without hurting yourself further.	1. Identify the vehicle recovery triangle and the associated dangers of recovery. 2. Identify the use of gloves during a recovery. 3. Identify safe recovery procedures. 4. To make sure that you will not hurt yourself further, it is important for a rider to assess themselves. 5. To make sure a rider does not hurt themselves while picking up a motorcycle, the rider needs to use the proper techniques. The learner must understand and demonstrate a good grasp of the two solo pickups and one double pickup. Each pickup technique has pros and cons, and the learner should understand them. 5. Identify the use and limitations of an emergency tyre repair kit.

Note: The trail grading, types of terrain covered (e.g. sand, gravel, riverbeds, mud and snow) and recovery procedures and equipment used during facilitation and assessments must be clearly stated. This information must be included on the learner's certificate.

6.3 Advanced techniques for operating quad bike and side by side vehicles in off-road conditions

The learning modules, sections, units and outcomes for this course are indicated in the table below.

Table 3: Advanced techniques for operating quad bike and side by side vehicles in off-road conditions course - learning modules, sections, units and outcomes

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
1	Vehicle	1.1	Vehicle	1.1.1	Know your vehicle	1. A basic understanding about torque, traction and wheel slip. 2. Centre of gravity relates to the ability to get up or down a slope. 3. Understand how to move your weight to give one wheel more or less weight. This will affect the amount of traction each wheel has.	1. Identify the power/torque distribution under off-road conditions. 2. Demonstrate a good understanding of how to move on the bike to manipulate the amount of traction of each wheel.
2	Driving skills	2.1	Driving skills	2.1.1	Operate a quad bike and side by side vehicles in off-road conditions	1. When riding off-road, the learner should be familiar with how to manoeuvre his/her vehicle on all types of terrain and in a variety of conditions. 2. Understand when to select the various configurations and driving aids of the vehicle 3. Understand the procedure(s) to select the various configurations and driving aids of the vehicle.	1. Demonstrate the stopping distances on different surfaces (tar, gravel, mud, sand, snow, etc.) 2. Demonstrate driving the correct lines through obstacles on a grade 3 track/trail (sand or dunes, mud and snow and water/river crossings). 3. Demonstrate driving the correct lines through obstacles on a grade 5 track/trail. This is only

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
							done if the learner's vehicle is suited for grade 5 obstacles. ¹
				3.1.3	Weight distribution	1. When riding a quad bike/side by side, it is important to give your wheels as much traction as possible. 2. As a rider you need to be able to feel how much traction, and thus control, each wheel has and how to distribute your weight to be able to get the desired amount of traction from each wheel.	1. The learner must be able to ride at a slow speed and lock the front wheel. This will show if the learner can move their weight to the back and in so take traction away from the front wheel. 2. The learner must be able to move their weight around on the bike while making sure their weight is transferred through their feet (foot peg) or their seat.
				3.1.4	Braking	1. When riding at fast speeds it is sometimes necessary to move your weight while braking to be able to make a turn.	1. The learner must be able to understand the entire sequence of braking, shown in the previous course. 2. The learner must be able to move their weight left and/or right as the situation requires. This needs to be done while still having control of the front wheel.
3	Recovery	3.1	Recovery equipment	3.1.1	Recovery principles	1. It does not matter how experienced one is, at some stage one will get stuck in an obstacle while riding off-road. It is important to be prepared, have	1. Identify various recovery forces and the importance as well as the dangers thereof.

¹ The learner is certified to drive trails with a grade 3 rating if grade 4 or 5 obstacles were not driven during the training event.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
						the correct recovery equipment on a vehicle and know how to use it correctly. 2. Certain components of the vehicle as well as recovery equipment are exposed to serious mechanical forces during recoveries. 3. There is a risk of equipment failing during recoveries. Failed equipment flying through the air can cause serious bodily injuries or deaths. Safety procedures should be put in place during recoveries. 4. Communication during recoveries will not only make the recovery more effective, but it can prevent injuries or death. Communication during recoveries might differ from the communication when being guided through obstacles. 5. Safety equipment was designed to assist with the safety aspects related to recoveries.	2. Demonstrate safety procedures during recoveries. 3. Demonstrate communication during recoveries. 4. Demonstrate the use of safety equipment during recoveries. 5. Demonstrate how to tow a quad bike/side by side with another quad bike/side by side.
		3.2	Practical recovery	3.2.1	Fixing a puncture	1. Quad bikes/side by side can have tubeless and tubed tyres.	1. Identify what type of tyre does the bike has.

Learning module		Learning section		Learning unit			
No	Description	No	Description	No	Description	Content (including but not limited to)	Outcome
						Understanding the difference between them is important. 2. Fixing a puncture differs between tubed and tubeless tyres.	2. Demonstrate the use of a tyre repair kit for a tubeless tyre. 3. Demonstrate how to remove a wheel to be able to remove the tube for a tubed tyre. Demonstrate how to remove the tube, patch a puncture and replace the tube. Demonstrate how to replace the wheel.
				3.2.2	Self-recovery	1.Uphill recovery 2.Sand recovery 3.Log recovery 4.Rock recovery	1. There learner must be comfortable with doing an uphill recovery. 2. When getting stuck in sand, it is important to be able to get the wheels on top of the sand and to be able to get momentum as quickly as possible. The learner must be able to rock the bike, to get momentum. The learner must also be able to get the rear wheel out of a ditch. 3. The learner must be able to understand and demonstrate how to recover the bike when the front wheel has gone over a log, but the back wheel is still behind the log. The learner must rock the bike and then use the momentum to get the bike over the log. 4.The learner must be able to demonstrate how to rock the bike over rocks to be able to get momentum so that they can ride over the rocks.

Note: The trail grading, types of terrain covered (e.g. sand, gravel, riverbeds, mud and snow) and recovery procedures and equipment used during facilitation and assessments must be clearly stated. This information must be included on the learner's certificate.

7 Critical cross-field outcomes

The critical cross-field outcomes listed below are embedded in the training methodology and activities during presentation of training.

- a. Identify and solve problems using critical and creative thinking processes are addressed when identifying potential hazards and recognising existing hazards and dangerous situations and identifying ways to eliminate or minimise them when operating a quad bike and side by side vehicle in various conditions and terrains.
- b. Work effectively with others as a member of a team, group, organisation or community are addressed when imparting the necessary skills and knowledge to participants in various quad bike and side by side vehicles operating conditions.
- c. Organise and manage oneself and one's activities responsibly and effectively are addressed when maximising use of various quad bike and side by side vehicles features and uses in various operating conditions.
- d. Collect, analyse, organise and critically evaluate information when collecting information on and understanding all the vehicle features, tools and maintenance procedures in various operating conditions.
- e. Communicate effectively using visual, mathematical and/or language in the modes of oral and/or written persuasion are addressed when conveying information pertaining to operating conditions, etc. to other drivers and passengers in the vehicle.
- f. Demonstrate an understanding of the world as a set of interrelated systems is addressed when recognising the potential negative effect undisciplined use of various quad bike and side by side vehicles can have on the environment and on other road users as well as understanding the effect of terrain, weather conditions and other road users on a vehicle and its safety.
- g. Participate as responsible citizens in the life of local, national and global communities ensuring that environmental conditions and safety and health procedures relating to various quad bike and side by side vehicles activities are adhered to.

8 Sequence of learning events

The learning units of these courses are presented in a linear manner. Learning units may be sequenced to suit the requirements of the learning event.

9 Training delivery

9.1 Training methods

The training methods that are used during the courses are described in the table below.

Table 4: Training methods

Methodology	Description
Demonstration	A technique that shows how something works or gets done. It is intended to illustrate or clarify an idea, process, or relationship.
Drill and practice	The learner learns the content by means of exercises. These exercises can be done more than once. This learning method is best used when teaching processes and certain abilities.
Group discussion	The group discussion method enables learners to think deeply and come to a conclusion about a topic. Learners focus on a single item or problem. Interactive skills are developed and the teamwork approach has a positive effect on attitudes and motivation. Facilitators will encourage discussions.
Reading (self-study)	Readings are the printed matter assigned to individuals in the form of articles, books, or pamphlets. Readings are often coupled with a study guide or discussion question for use during a class session.
Interactive demonstrations	Interactive demonstrations allow learner watchers to do something instead of merely observe. Job Instruction Training (JIT) is a perfect format for this.
Note-taking	For some people note-taking may be necessary to “imprint” the data. These people need to hear it, see it in the visual aids, and then to see it again as they begin to “own” the idea by writing it down themselves.
Questioning	The questioning strategy consists of developing and asking a variety of questions designed to test learning and stimulate discussion.
Scenario	The learners are presented with a scenario and they have to analyse the situation and arrive at a conclusion using their critical thinking and judgement skills.
Simulation	Simulation is a representation of a real-life situation - usually a situation requiring appropriate actions and reactions or a situation requiring the demonstration of technical expertise.

9.2 Training media

The media used to facilitate these courses include a whiteboard, flip charts, computers, multimedia data projectors and training aids.

9.3 Training facilities

These courses must be held at a suitable venue with a lecture room and toilet facilities, as well as a 4x4 track/trail.

10 Assessment

10.1 Assessment process

Assessment is a process of collecting evidence in order to determine whether learners have achieved the specified learning outcomes. These learning outcomes will serve as the basis for the assessment due to the fact that they are linked to predetermined assessment criteria. The main steps in the assessment process are indicated below.

- a. The assessor plans and explains the assessment process to the learners.
- b. The assessor judges the performance of the learners against the learning outcomes and assessment criteria. In this the assessor uses applicable assessments instruments.

The assessor will ensure that the assessment process adheres to the principles as listed in the table below.

Table 5: Applicable assessment principles

Methodology	Description
Fair	Learners are assessed using the same assessment methods and tools.
Valid	The assessment measures what it is supposed to measure/assess.
Reliable	The same results will be obtained even if the assessment is conducted by different assessors.
Practicability	The assessment is relevant to the level of knowledge, skill and attitude that it assesses.

If learners are not satisfied with the manner in which the assessment process was executed, they may launch an appeal against the assessment process in writing.

10.2 Assessment methods, tools and techniques

The assessor will judge the collected evidence of performance against the learning outcomes and assessment criteria by using a wide range of methods, tools and techniques. This includes verbal questioning, observing and assessment of learner product.

The assessment methods and tools will enable learners to produce authentic, current and sufficient evidence for the assessor to make a fair judgement in terms of their competence.

10.3 Assessment

Informal formative assessments will be conducted during the facilitation process to monitor learners' progress and determine whether they have acquired knowledge, skills and attitudes. Any areas requiring further attention will be addressed and reassessed. For learners from the recreational customer base (paragraph 3), formative assessments may be sufficient to issue an attendance certificate unless a learner requires summative assessments for personal reasons (competency certificate).

Summative assessments will be used for learners from the commercial customer base (see paragraph 3). A competency certificate must be issued to learners from this customer base.

10.4 Course and assessment requirements

Learners will be required to demonstrate knowledge, understanding and application (as applicable) of the outcome(s) of the learning units in order to be deemed competent against the requirements of a specific SA AIA course. These outcome(s) are identified in paragraph 6 of this curriculum.

The assessor will provide verbal feedback to the learner and clearly indicate whether the learner is competent or not yet competent.

Verbal motivation will be provided to a learner when a learner is not yet competent immediately after conclusion of the course. This will be followed by a written report to the learner within 7 working days from the course date detailing the reasons for the decision of the assessor as well as the proposed corrective actions.

11 Course evaluation

11.1 Evaluation by the learner

After completion of the course, the learners provide formal course feedback that addresses the following:

- a. facilitator preparation;
- b. venue and equipment;
- c. track/trail;
- d. facilitation;
- e. learning material;
- f. training aids;
- g. assessments; and
- h. general comments.

11.2 Evaluation by the facilitator

After completion of the course, the facilitator compiles a course review report. This report indicates the learner results as well as any issues and/or incidents that need to be addressed to improve future courses.

12 Annexures

12.1 Annexure A: referenced and applicable documents

12.1.1 Referenced documents

- a. Bloom's Taxonomy of Educational Objectives (published in 1956 and revised in 2001)

12.1.2 Applicable documents

None.

12.2 Annexure B: abbreviations

Abbreviation	Description
4WD	4 wheel-drive
AWD	all wheel drive
GVM	gross vehicle mass
OEM	original equipment manufacturer
QCTO	Quality Council for Trades and Occupations
N/A	not applicable
NQF	National Qualifications Framework
SA AIA	South African Adventure Industry Association
SAQA	South African Qualifications Authority
TETA	Transport Education Training Authority
US	unit standard

12.3 Annexure C: acknowledgements

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