

## Curriculum

To be reviewed by <b>Feb. 2026</b>	Activity number <b>48.b</b>	<b>Vehicle Safety and 4x4 Driving</b>	<b>ECTS</b> <b>1</b>
			SQF-MILOF N/A

CORRELATION WITH CTG / MTG TRAs	EQUIVALENCES
<b>Training Requirement Analysis (TRA) Report, CTA Safety &amp; Security, February 2021</b>	N/A

<p style="text-align: center;"><u>Target audience</u></p> <p><i>Participants should be persons deploying to CSDP missions with required self-driving in rough terrain</i></p> <p><i>Priority is given to the personnel selected to the CSDP Missions and Operations.</i></p> <p><u>Open to:</u></p> <ul style="list-style-type: none"> <li>▪ EU member States / Institutions</li> <li>▪ Third countries</li> <li>▪ International Organisations</li> </ul>	<p style="text-align: center;"><u>Aim</u></p> <p>This course familiarises and systemises the knowledge and practical skills in safe and effective usage of vehicles in remote areas without technical support, in difficult/close to extreme driving conditions with various 4x4-vehicle settings, amassing the vehicle operator/crew safety and operational effectiveness.</p>
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Learning Outcomes	
Knowledge	L01. Explain technical aspects of 4x4 vehicle settings respectively to changing terrain/surface conditions L02. describe technical features of 4x4 vehicles construction, emphasizing the aspect of its practical usage in off road conditions L03. Present examples of behaviour for a driver in extreme road, terrain configuration, assuring safe performance of the operational task
Skills	L04. Operate safely and effectively vehicles' recovery equipment, wheel changing and snow chains fitting

	<p>LO5. Assessment of current road/terrain conditions leading to the 4x4 vehicle settings, aiming at safe and effective negotiation of the road stretch</p> <p>LO6. Reading terrain features, identifying the most effective and safe driving path, driving up/down slope or on a side incline</p> <p>LO7. Using terrain features for the safe road negotiation limiting the vehicle's technical, geometrical limitations.</p>
Responsibility and Autonomy	<p>LO8. Evaluate and measure risks on any stretch of the road/terrain and eliminate any excessive risk for the operational task, vehicle or crew safety</p> <p>LO9. Assess, terrain and set the 4x4 vehicle to the actual conditions</p> <p>LO10. Co-ordinate and contribute to the team approach in reducing vulnerabilities and increasing strengths</p>

### Evaluation and verification of learning outcomes

• **Level 1 Observation and Satisfaction:**

*Active observation and feedback by the course facilitator, assessment of the course participants at each exercise progress, only after satisfactory level of skills is demonstrated movement ahead with more demanding exercise is possible.*

## Course structure

The residential module is held over two days.

Main Topic	Suggested Working Hours (required for individual learning)	Suggested Contents
1. In Test	(4)	1.1 E-learning component focussing on driving and safety
2. 4x4 Vehicle working principle	1 (theory)	<p>2.1 Differential working principle with its limitations in off road driving, slippery surface influence</p> <p>2.2 4x4 settings change respectively to the driving changing conditions, surface type, terrain gradient, presence of obstacles</p> <p>2.3 Soft shell versus armoured vehicles</p>
3. 4x4 Vehicle wheel change	1 (theory) 2 (practice)	<p>3.1 Identification of safest possible location</p> <ul style="list-style-type: none"> <li>- Suitable terrain selection, firm surface</li> <li>- Usage of the terrain features for reducing/using of the weight shift in uneven terrain</li> </ul> <p>3.2 Vehicle securing</p> <ul style="list-style-type: none"> <li>- Usage of the 4x4 settings</li> <li>- Hand brake</li> <li>- Securing the of the diagonal wheel</li> </ul> <p>3.3 Preparation of the spare wheel, securing the vehicle with the spare wheel</p> <p>3.4 Usage of the jack and associated tools</p> <p>3.5 Wheel change</p> <p>3.6 Safety during the operation</p> <p>3.7 Usage of the torque wrench</p>
4. 4x4 Vehicle snow chain installation	1 (theory) 1 (practice)	<p>4.1 Snow chain types, differences in construction, locks, performances</p> <p>4.2 Vehicle securing for the snow chain installation</p> <p>4.3 4x4 vehicle – which axle wheels to install snow chains</p>

		4.4 Limitations in the usage of snow chains 4.5 Safety during the operation
5. 4x4 Vehicle recovery	1 ( theory) 2 (practice)	5.1 Snatch strap recovery <ul style="list-style-type: none"> <li>- Recovery organisation</li> <li>- Recovery risk assessment</li> <li>- Recovery setup</li> <li>- Terrain configuration, space availability, surface type &amp; gravity aspect in recovery</li> <li>- Safety during the operation</li> </ul> 5.2 Winch recovery <ul style="list-style-type: none"> <li>- Winch familiarisation, construction, practical use</li> <li>- Forces working during the winch usage</li> <li>- Snatch block usage aspects</li> <li>- Recovery organisation</li> <li>- Recovery risk assessment</li> <li>- Recovery setup</li> <li>- Recovery accessories facilitating the winch operation</li> <li>- Terrain configuration, space availability, surface type &amp; gravity aspect in recovery</li> <li>- Safety during the operation</li> </ul>
6. Practical 4x4 vehicle driving	7 (practice)	6.1 Soft shell and armoured vehicles respective driving characteristics 6.2 Position behind the steering wheel – driving safety and effectiveness 6.3 Clutch usage while driving in off road conditions versus driving safety 6.4 Effective usage of mirrors 6.5 Basics of off road driving 6.6 Adequate 4x4 settings to respective terrain features 6.7 Vehicle angles & ground clearance 6.8 Familiarisation with vehicle performance in extreme driving conditions uphill & downhill driving – driving forward & reverse 6.9 Recovery of steep climb failure 6.10 Terrain assessment – best path identification
<b>TOTAL</b>	<b>16 (4)</b>	

<p style="text-align: center;"><u>Materials</u></p> <p><b>Required:</b> <u>Mandatory e-Learning:</u></p> <ul style="list-style-type: none"> <li>- SAFE</li> <li>- MISSIONWISE</li> </ul>	<p style="text-align: center;"><u>Methodology</u></p> <p>Driving Training implicates a strong emphasize on practical driving. But nevertheless, there are necessary theoretical inputs prior to the practical driving training. All parts of the training should be based on the concept of adult learning and as interactive as possible by using group discussions, role plays and practical/interactive exercises.</p> <p style="text-align: center;"><u>Additional information</u></p> <p>All course participants have to prepare for the residential module by going through the relevant e-Learning preparatory phase, which is mandatory.</p> <p>The Chatham House Rule is applied during all residential modules: "participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed".</p>
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