



CPD Subject Framework

Introduction

IMI TechSafe® is professional recognition within the IMI Professional Register. It identifies an individual's professionalism and safe working practice in the field of safety critical vehicle systems, such as:

- Electric and Hybrid Vehicles (EV)
- Autonomous or Advanced Driver Assistance Systems (ADAS)
- Hydrogen Vehicles

IMI TechSafe® recognition is obtained through proof of competence, by achieving a nationally recognised qualification(s) or IMI accreditation(s), IMI TechSafe® recognition confirms that an individual keeps up to date through mandatory requirements for continuous professional development (CPD).

IMI TechSafe® CPD subject frameworks are developed and agreed with IMI Sector Advisory Groups, containing enough flexibility to allow the individual to cover the subject areas that apply to their relevant daily activity, and/or areas of further interest.

CPD enables individuals to maintain their knowledge and skills in the areas detailed in the framework. By completing and passing relevant and approved CPD within 3 years of achieving their initial recognition, IMI TechSafe® recognition will be retained.

Individuals will hold qualifications at various levels. To ensure CPD adds the most value to the individual, training providers can offer dedicated CPD to cover each level, easily identified by the individual, so they can make an informed choice on their personal CPD requirements, as an example, whilst an individual may hold a L4 Electric Vehicle qualification, they may be looking for CPD at Level 2, or 3 to expand their knowledge and skills.

CPD Delivery

- CPD will be delivered to the individuals in various ways, such as, but not limited to: face to face training, virtual classrooms and eLearning. The delivery method must be in a format that enables the most effective learning and assessment to take place
- All CPD must be approved by a regulated Awarding Organisation
- All CPD must contain an assessment, to assess knowledge, and/or practical skills
- Assessments will be internally and externally quality assured by the provider of the assessment(s) and the relevant Awarding Organisation respectively

Knowledge Assessments

- As a minimum, CPD knowledge assessments must be created and delivered by the training provider to assess an individual's subject knowledge upon completion of the CPD. The training provider can choose to assess knowledge and/or practical skills as appropriate to the CPD.
- CPD knowledge assessments do not need to be invigilated
- CPD knowledge assessments must be relevant to the CPD subject covered and could be scenario-based to bring a practical context to the questioning where appropriate. Assessment methods could be:
 - a. Multiple-Choice Question (MCQ) test. MCQ's will consist of a stem/question followed by four possible answers. One answer should be the correct choice plus three distractors
 - i. 20 questions, in 40 minutes
 - ii. Bank of 50 questions
 - b. Short answer questions, where the individual will write a response to a pre-set question
 - i. Typically responses of 100 words, per question
 - c. Professional discussion, to demonstrate subject knowledge
 - i. Typically 30 minutes discussion, based on CPD subject(s)

Practical Assessments

- Where deemed appropriate by the training provider, practical skills assessments can be created and delivered to assess an individual's skills upon completion of the CPD
- CPD practical skills assessments must be relevant to the CPD subject covered. Assessment methods could be:
 - a. Practical skills task, to validate individuals competence in the subject area
 - i. Carried out in a training environment, or the individual's workplace
 - ii. Observed by competent assessors, as agreed with the relevant Awarding Organisation
 - b. Professional report, produced following the inspection of a vehicle
 - i. Checked against an exemplar report, produced by the training provider

PLEASE NOTE: Time for assessments **is not** included in the CPD unit hours.

The CPD subject framework set out in this document has been developed and agreed with an IMI Sector Advisory Group and Technical Working Group. Each subject area has a given number of learning hours and the type of assessment required.

Best practice events will be scheduled annually and attended by Awarding Organisations, to support a standardised approach for the delivery of this framework.

This framework will be reviewed annually to ensure the content remains up to date and relevant, any updates being agreed by the IMI Sector Advisory Group and Technical Working Group in line with sector requirements and technology changes.

For further information please email the IMI at hello@theimi.org.uk

For Office Use Only		
Issue and date	Change detail	Section/page
Issue 1 - June 2022	Original	N/A
Issue 2 – July 2023	Minor wording changes in some modules	Throughout
	Updated CPD content following annual review	Throughout
Owner: Quality Manager		

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IMI CPD Subject Framework

Category:	Electric and Hybrid Vehicles
	<ol style="list-style-type: none"> 1) Safety issues in respect of the maintenance and repair of electric and hybrid vehicles: <ul style="list-style-type: none"> ▪ Risk of electric shock ▪ Risk of fire ▪ Risk of inhalation of poisonous gases ▪ Relevant guidance ▪ Codes of practice ▪ HSE perspective ▪ Manufacturer's recommendations 2) Manufacturer's terminology in relation to electric and hybrid vehicles: <ul style="list-style-type: none"> ▪ Interpretation of terminology from manufacturers information 3) Electric and hybrid vehicle battery technologies, operation, use and storage: <ul style="list-style-type: none"> ▪ Technologies ▪ Cooling ▪ Heating ▪ Chemistry/materials ▪ Multiple packs ▪ Degradation ▪ Storage 4) Electric and hybrid vehicle cabling and circuits: <ul style="list-style-type: none"> ▪ Cables ▪ Safety system ▪ Pilot line ▪ Breakers ▪ Circuit layout 5) Electric and hybrid vehicle motors and generator technologies, operation and use: <ul style="list-style-type: none"> ▪ Technologies ▪ Radial and axial ▪ Switched reluctance motor 6) The context and process of the salvage and recycling of electric and hybrid vehicles: <ul style="list-style-type: none"> ▪ Materials ▪ Component value ▪ Safety ▪ Alternative battery uses

- 7) Electric and hybrid vehicle charging systems, processes and technologies:
 - Fast charging issues
 - Inductive, static, dynamic
 - Overhead
 - 800/400 volt methods
 - Modes
 - Vehicle to grid

- 8) Manufacturer methods for accident repair and refinishing of electric and hybrid vehicles:
 - Ovens
 - Relevant methods and techniques
 - Safety
 - Guidance/requirements

- 9) Practical processes in the maintenance and repair of electric and hybrid vehicles:
 - Manufacturers' recommendations
 - Servicing
 - Alternative fuel (e.g. Hydrogen)
 - Methods and techniques

- 10) Aftermarket, classic and vintage and DIY built electrified vehicles:
 - Aftermarket electrification of vehicles
 - Classic and vintage car updates to electrification
 - DIY built electric vehicles

- 11) Tools and equipment required for the maintenance and repair of electric and hybrid vehicles:
 - Diagnostic tools
 - Insulated tools
 - General tools

- 12) Roadside assistance, recovery and storage of electric and hybrid vehicles:
 - Scene management, including Road Traffic Accidents
 - Towing, recovery and transportation
 - Risk of fire
 - Risk of electric shock
 - Risk of inhalation of poisonous gases
 - De-energisation
 - Temperature monitoring
 - First responder information
 - Long term storage

CPD Hours:

18 hours across a 3 year CPD cycle covering from 1 to several, or all 12 subject areas, as appropriate.

Assessment Method:

Knowledge as a minimum and/or practical skills to be determined by training provider

Category:	Autonomous or Advanced Driver Assistance Systems (ADAS)
	<ol style="list-style-type: none"> 1) Safety issues in respect of the maintenance, repair and calibration of ADAS: <ul style="list-style-type: none"> ▪ Relevant guidance ▪ Codes of practice ▪ HSE perspective ▪ Calibration environmental conditions ▪ Previous repairs, including component replacement ▪ Manufacturer's recommendations ▪ Insurance Industry Requirements (IIR) 2) Manufacturer's terminology in relation to ADAS: <ul style="list-style-type: none"> ▪ Interpretation of terminology from manufacturers information 3) Sensors and Actuators: <ul style="list-style-type: none"> ▪ Relevant updates ▪ Operational controls ▪ Relevant methods ▪ Coding and programming 4) Manufacturer methods for accident repair and refinishing in relation to ADAS: <ul style="list-style-type: none"> ▪ Ovens ▪ Relevant methods and techniques ▪ Safety ▪ Guidance/requirements 5) Practical processes in the maintenance and repair of ADAS: <ul style="list-style-type: none"> ▪ Manufacturers' recommendations, including wheel alignment/geometry ▪ Servicing ▪ Relevant methods and techniques 6) Tools and equipment required for the maintenance, repair and calibration of ADAS: <ul style="list-style-type: none"> ▪ General tools ▪ Diagnostic tools ▪ Special tools ▪ Alignment equipment (e.g. Geo/target) ▪ Relevant methods of calibration ▪ Relevant updates to Software/Hardware
CPD Hours:	10 hours across a 3 year CPD cycle covering from 1 to several, or all 6 subject areas, as appropriate.
Assessment Method:	Knowledge as a minimum and/or practical skills to be determined by training provider

Category:

Hydrogen Vehicles

- 1) Safety issues in respect of the maintenance and repair of Hydrogen vehicles:
 - Risks of handling Hydrogen
 - Risk of fire
 - Risk of inhalation of poisonous gases
 - Relevant guidance
 - Codes of practice
 - HSE perspective
 - Manufacturer's recommendations
- 2) Manufacturer's terminology in relation to Hydrogen vehicles:
 - Interpretation of terminology from manufacturers information
- 3) Hydrogen vehicle technologies, operation, use and storage:
 - Technologies
 - Cooling
 - Heating
 - Chemistry/materials
 - Refuelling
 - Isolation
 - Storage
- 4) The context and process of the salvage and recycling of Hydrogen vehicles:
 - Materials
 - Component value
 - Safety
 - Alternative uses
- 5) Manufacturer methods for accident repair and refinishing of Hydrogen vehicles:
 - Ovens
 - Relevant methods and techniques
 - Safety
 - Guidance/requirements
- 6) Practical processes in the maintenance and repair of Hydrogen vehicles:
 - Manufacturers' recommendations
 - Servicing
 - Common repairs
 - Calibration
 - Methods and techniques

	<p>7) Tools and equipment required for the maintenance and repair of Hydrogen vehicles:</p> <ul style="list-style-type: none"> ▪ Diagnostic tools ▪ General tools <p>8) Roadside assistance, recovery and storage of Hydrogen vehicles:</p> <ul style="list-style-type: none"> ▪ Scene management, including Road Traffic Accidents ▪ Towing, recovery and transportation ▪ Risk of fire ▪ Risk of electric shock ▪ Risk of inhalation of poisonous gases ▪ De-energisation ▪ Temperature monitoring ▪ First responder information ▪ Long term storage
CPD Hours:	10 hours across a 3 year CPD cycle covering from 1 to several, or all 8 subject areas, as appropriate.
Assessment Method:	Knowledge as a minimum and/or practical skills to be determined by training provider