



***CASES Physiology  
Laboratory Accreditation Guidelines***

Updated 2025

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## Overview of the accreditation process

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The Chartered Association of Sport and Exercise Sciences (CASES) Physiology Laboratory Accreditation Guidelines provide a comprehensive framework for ensuring high standards of practice in sport and exercise science physiology laboratories. These guidelines outline the criteria required for laboratories to achieve accreditation, including the demonstration of technical competence, adherence to ethical principles, and maintenance of safe, effective working environments. Aimed at promoting excellence, the accreditation process evaluates the laboratory's capabilities in delivering high-quality physiological testing and research. This document serves as a resource for laboratories seeking to enhance their professional credibility.

The accreditation process consists of two primary components: (1) a written application (submitted online), and (2) an on-site laboratory visit conducted by a member of the Laboratory Accreditation Advisory Group (with an optional pre-accreditation visit). While the accreditation process is designed to check specific criteria, it should be seen as an opportunity to collaborate with external experts to strive for continued improvement in laboratory operations. The process is most effective when, in addition to the criteria outlined below, laboratories identify where they would most benefit from external review to improve their own working practices. Laboratory accreditation provides organisations with a valuable opportunity to showcase their excellence and receive external recognition from CASES for upholding high standards in laboratory operations.

This document outlines the requirements for laboratory accreditation. For any additional inquiries regarding the accreditation process, please contact the CASES office.

## Accreditation checklist

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Laboratories that wish to be registered should complete the following:

1. CASES laboratory accreditation application form (online).
2. Letter of support from a line manager or head of department.
3. Laboratory accreditation portfolio.

In addition, institutions should be confident their facilities meet the criteria outline in section 2 of the lab accreditation survey (Appendix A).

Application for laboratory accreditation is [online](#). Any queries or issues contact [education@cases.org.uk](mailto:education@cases.org.uk)

## Laboratory directorship and management

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Each laboratory should nominate a CASES Laboratory Director. This should be the individual with the most comprehensive operational oversight of the laboratory and will be the CASES contact for the laboratory. The individual should hold a CASES membership and be either a CASES-accredited physiologist (in research or



support), or a member of the CASES Technical Special Interest Group. The laboratory director should be present during the accreditation visit.

All CASES-registered physiology laboratories must also identify the individuals responsible for daily operations (e.g. technicians) and those accountable for their performance (e.g. line managers). Laboratories must have at least one individual with CASES accreditation in either the area of support or research. These accredited individuals must be integral members of the laboratory operating group and are responsible for promoting excellence in research and/or support services. Laboratory management structure, including the aforementioned roles, should be outlined within the accreditation portfolio.

## Pre-accreditation visit

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It is strongly advised that laboratories should apply for accreditation only when they are confident of a positive outcome, as the process demands considerable time and expertise. For those unsure whether they meet the necessary standards, a pre-accreditation visit is highly recommended. Conducted by an experienced laboratory assessor from the accreditation committee, this visit offers valuable insights and the chance to benefit from expert guidance before the accreditation visit. Although a pre-accreditation visit does not guarantee a successful outcome, if feedback is acted upon and delivered to the required standard, subsequent accreditation is far more likely. While there is a fee for this service, it is a worthwhile investment, especially for first-time applicants. A completed portfolio is not required for a pre-accreditation visit.

A pre-accreditation visit is most effective during the early stages of the application process, particularly for institutions seeking guidance on how to approach accreditation and customize it to their specific needs. It provides a unique opportunity for one-on-one engagement with a member of the Laboratory Accreditation Advisory Group.

## Accreditation visit

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The accreditation visit, which lasts no more than 4 hours, will include a tour of the facilities seeking accreditation, a demonstration of operational effectiveness, and a follow-up discussion based on portfolio documentation. During the facility tour, Section 2 of the Laboratory Accreditation Survey will be completed. It is expected that the Laboratory Director and an appropriate member of the technical team will be present for the visit.

Operational effectiveness may be demonstrated in one of the following ways:

- a. The accreditor performing an exercise challenge and making comparisons with an already registered facility.
- b. Demonstrating the exercise task using a locally recruited volunteer and comparing to data from the same volunteer collected a few days prior to the visit.



If the traditional exercise challenge is not feasible due to the use of specialized equipment, the laboratory may be asked to demonstrate a routinely conducted exercise test. The nature of this test will be determined prior to the visit by the accrediting advisory group member.

During the visit, laboratory committee member might ask for additional examples of documents contained within the portfolio if they deem it necessary.

The accreditor makes provisional recommendations on the day subject to CASES Executive approval or rejection. In some cases, the inspecting committee member might issue recommendations that must be fulfilled before accreditation can be recommended to CASES. These should typically be addressed within six weeks, though the period could be extended in exceptional cases by the visiting advisory group member.

## Portfolio guidance

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The portfolio is a key component of the application process. All applicants must present the necessary evidence within their portfolio (see below). However, if they choose to reference specific documents hosted on an online storage platform, this is acceptable provided that the references are clearly indicated, and the documents are easily accessible to the reviewer.

### *Laboratory summary*

- Overview of laboratory activities, staff list including qualifications and accreditations, floor plan, and description of facilities.
- A description of laboratory management structure and operations. For example, who oversees daily operations? Who holds them accountable? Is there a broader laboratory user group and what is their remit in laboratory operations? How are decisions made?
- Insurance details.

### *Equipment*

- List of key equipment showcasing the laboratories' primary capabilities and areas of specialism. Mandatory equipment includes respiratory gas exchange, blood lactate, heart rate, anthropometry, and exercise ergometers (detailed in section 3 of laboratory accreditation survey).
- Examples of calibration procedures, maintenance checks, reliability and validity testing records, and service interval/procedures. Additional examples may be asked for during the accreditation visit and for re-accreditation, historical records might be requested.

### *Health and safety*

- Policies for first aid training and Hep B immunisation (n.b. Hep B immunisation is not mandatory; instead, a policy must be in place outlining the institutions stance).
- First aid certificates for all laboratory users.
- Example risk assessments for capillary blood sampling and exercise to exhaustion.
- An example COSHH assessment.
- Gas cylinder stock list, storage locations and example safety sheets (fire safety).

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- For protocols or procedures that have been identified as requiring staff to be trained (i.e. through risk assessments), how are staff and student competency assessed and maintained?
- How is participant screening conducted and informed consent taken? What is the process should contra-indications be identified?
- Emergency procedures in the event of illness or other event in the laboratory e.g. fire or cardiac arrest. How do you summon help? What kit do you have?

#### *Business continuity*

- What processes are in place to ensure continuity of laboratory operations knowledge during changes of staff?

#### *Data protection*

- Who is the data protection officer?
- Data policy and risk assessment including retention limits, deletion and anonymisation practices, minimisation of data collection, data purpose limitation, explicit consent, lawfulness of processing, and right to be forgotten.

#### *Sustainability*

- Outline your current sustainability practices.
- Describe your long-term sustainability plan.
- Evidence of an equipment disposal policy.

#### *Reliability data*

- Provide reliability data and interpretation for a sub-maximal exercise assessment incorporating respiratory gas analysis, heart rate, blood lactate, and RPE measures.
- Typically, this might look like two sub-maximal exercise assessments conducted on the same participant under the same conditions within a few days.

The following guidelines may not apply to all laboratories but are considered essential for those that engage in the relevant activities or possess the appropriate equipment.

#### *Athlete support (if applicable)*

- Examples of athlete feedback.

#### *Environmental chamber (if applicable)*

- Risk assessment, including temperature cut-off for heat work and O<sub>2</sub> injection percentage of system.
- Emergency procedures for cold, hot, and altitude related incidents.

## Frequently asked questions

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### *How long is the re-accreditation period?*



Laboratory accreditation lasts five years, after which, a re-accreditation visit is required to maintain registered status. The re-accreditation process is the same as the accreditation process.

***What happens if we need to change our nominated CASES Laboratory Director?***

The CASES office must be notified of any changes in status of the laboratory, including a potential change of directorship. Notification of changes does not automatically ensure continued registered status and a formal application for continued accreditation must be made with a letter explaining the laboratory's individual circumstances. An application for change can be made [here](#).

***What happens if our CASES accredited member of staff leaves?***

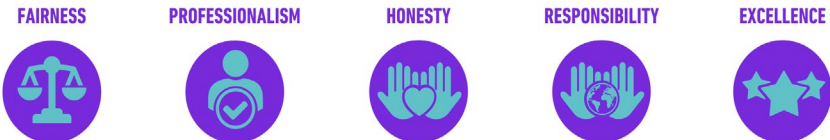
To be maintain CASES laboratory accreditation, laboratories must have a CASES accredited member of staff, in research or consultancy, involved in the management of the laboratory. Should this individual leave and there is no immediate replacement a formal application for continued accreditation must be made with a letter explaining the laboratory's individual circumstances.

***Do CASES accredit non-UK, international, laboratories?***

Overseas laboratories may apply for laboratory accreditation, and this will be acknowledged as such with the title CASES Registered Laboratory (Overseas). Overseas (including the Irish Republic) laboratories applying for registered status must also agree to meet the costs for all international travel, reasonable subsistence and accommodation where necessary in addition to the standard accreditation fee.



APPENDIX A – Physiology accreditation survey report form



## PHYSIOLOGY LABORATORY ACCREDITATION SURVEY REPORT FORM

When completed, please return this form to the CASES, G07 and G08, Fairfax Hall, Leeds Beckett University, Headingley Campus, Leeds, LS6 3QT or [officemanager@CASES.org.uk](mailto:officemanager@CASES.org.uk)

Section 1: General Information	
Date of visit:	
Institution:	
Nominated laboratory director (and CASES membership number):	
CASES accredited individuals (inc. date accreditation awarded and domain of expertise):	
Support staff present for visit:	
Laboratories included in accreditation application:	
Accreditor:	

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**Section 2: Laboratory Environment: (assessed during the accreditation visit)**

Appropriate flooring	
Ambient temperature monitoring	
Barometric pressure monitoring	
Relative humidity monitoring	
Ventilation adequate? Fans available?	
Safe storage of gas cylinders	
Blood analysis area	
Sharps disposal	
Contaminated waste disposal	
Sterilisation of mouthpieces etc.	
Defibrillator (mandatory)	
First aid kit	
Telephone line	
Suitable emergency procedures	

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**Section 3: Laboratory administration:** (assessed either via portfolio or during the accreditation visit)

**Equipment:**

	Comments
Servicing documents	
Maintenance checks	
Reliability and validity records testing	

**Health and safety**

COSHH	
Risk assessments	
Staff competency procedures	
Consent and participant screening.	
Hep B policy	
Accident and incident procedures	
First aid qualifications	

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Gas cylinders	
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**Business continuity**

Business continuity plans	
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**Data protection**

Password protection	
Data operations	

**Sustainability**

Equipment disposal	
Sustainability action plan	

**Reliability data:**

Sub-maximal exercise test reliability data	
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**Athlete support (if applicable):**

Athlete feedback	
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**Environmental chamber (if applicable):**

Risk assessment	
O <sub>2</sub> injection percentage	
Emergency procedures	



Section 3: Mandatory equipment			
Instruments	Equipment Available	Working OK ?	Servicing documents available? Validity, reliability data available?
<i>Anthropometry:</i>			
<i>Heart rhythm:</i>			
Respiratory gas exchange:			
Exercise ergometry:			
<i>Lactate analyser:</i>			
Other laboratory instruments (at request of laboratory):			
Environmental chamber (if applicable)			

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## Section 4: Operational Proficiency

[Subsections 1 and 2 below relate to the demonstration of an exercise test treadmill test.] This should include a period of steady-state exercise of 10 minutes duration BELOW the exerciser's estimated "lactate threshold" or 1<sup>st</sup> abrupt upward change in slope. Where relevant, oxygen consumption, respiratory gas exchange and blood lactate should be measured at 5-6 minutes and 9-10 minutes. Subsequently, the exerciser should complete another stages, each of four minutes duration, at progressively higher intensities which span his or her estimated "lactate turnpoint" or 2<sup>nd</sup> abrupt upward change in slope. Again, gas exchange and blood lactate should be measured towards the end of each stage.]

### 1. Gas exchange measurement (submax demonstration, max records)

**Satisfactory**    **Modification needed (see below)**    **Unsatisfactory**

**Comments:**

.....  
.....  
.....  
.....

VO<sub>2</sub> RER, data attached.      Repeatability       Validity  

### 2. Blood lactate measurement (where relevant)

**Satisfactory**     **Modification needed (see below)**     **Unsatisfactory**

**Comments:**

.....  
.....  
.....  
.....

Lactate values attached.       Repeatability       Validity  

### 3. Demonstration of a different exercise test or procedure for those laboratories not able to carry out the tests highlighted above

**Satisfactory**     **Modification needed (see below)**     **Unsatisfactory**

**Comments:**

.....  
.....  
.....  
.....

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