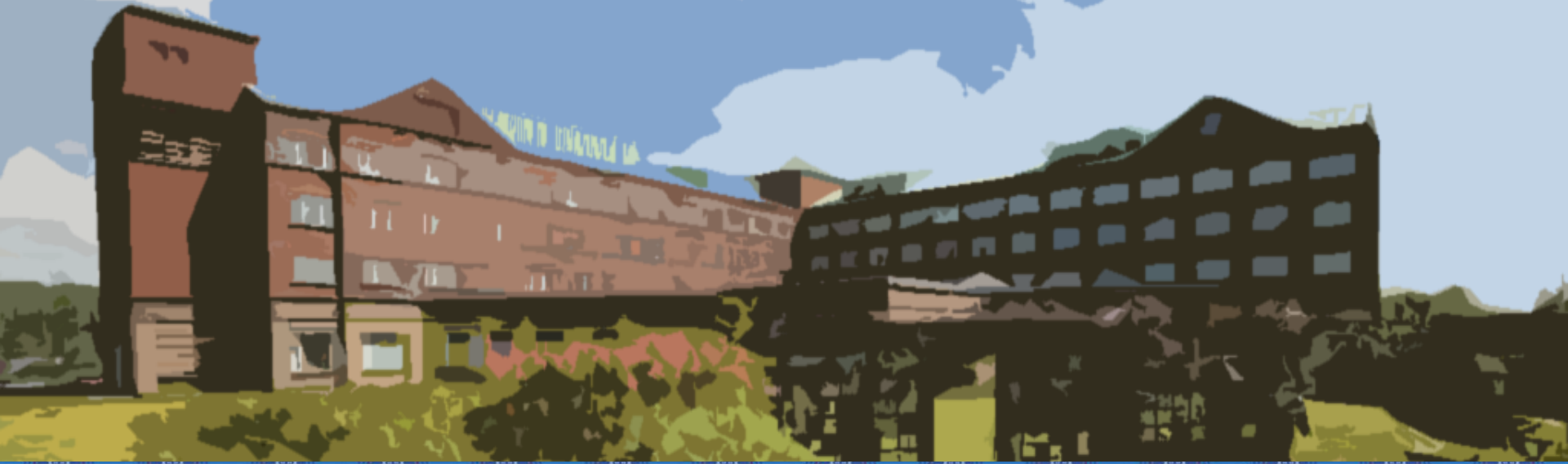


BINDT: E-learning and exams



The Scottish Branch of the British Institute of Non-Destructive Testing

Career development in NDT and inspection

Friday 30 January 2026 at the Golden Jubilee Conference Hotel, Glasgow, UK



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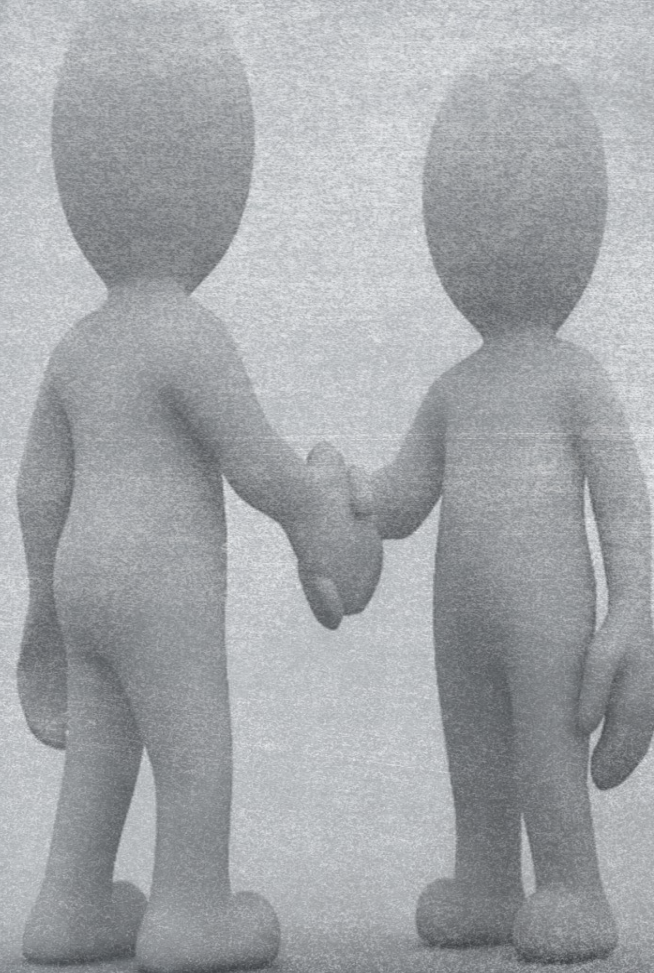
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NDT ensures the integrity of components and systems within key industry and product sectors



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Common factors



- Growing global demand for qualified NDT personnel
- Modernised training methods:
- Recognise: E-learning and blended learning provide flexible, scalable delivery of NDT theory
- Remain compliant with standards ([ISO 9712 / TS25108](#))



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TS 25108

Since the effectiveness of NDT personnel is dependent on the technical knowledge required, a system to evaluate and document the appropriate theoretical knowledge and practical competences is required.

To harmonize and maintain training and certification of NDT personnel, TS 25108, together with TS 25107 for training syllabuses were developed to serve those involved in training



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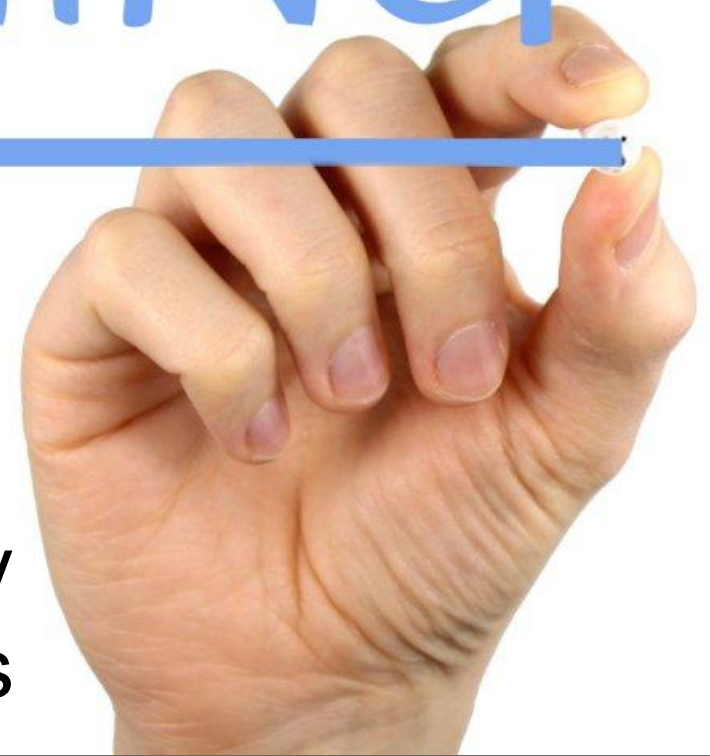
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TS 25108

TRAINING

Establishes the minimum requirements for effective structured training of NDT personnel to ensure eligibility for qualification examinations

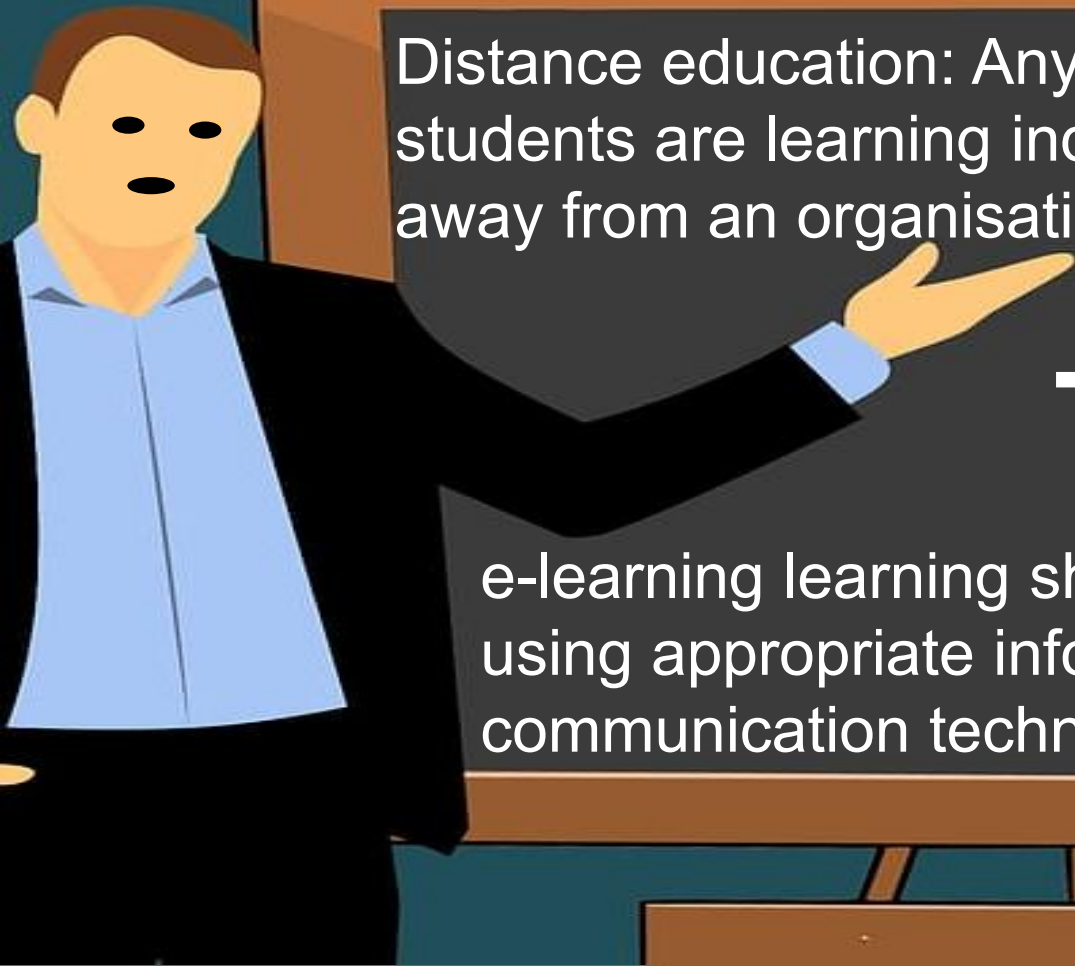


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Distance education: Any mode of delivery where students are learning independently at a location away from an organisation's premises.

TS 25108

e-learning learning shall be facilitated using appropriate information and communication technology: See Annex B.



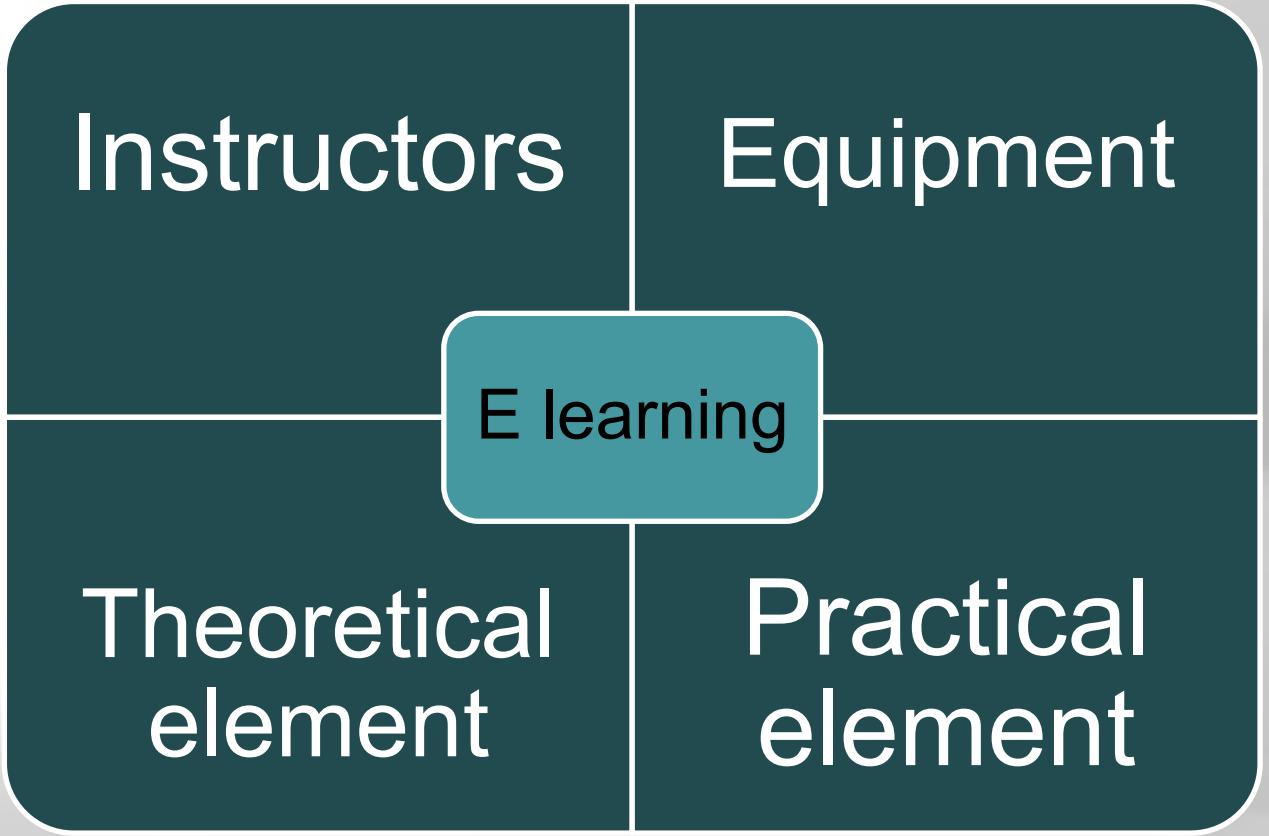
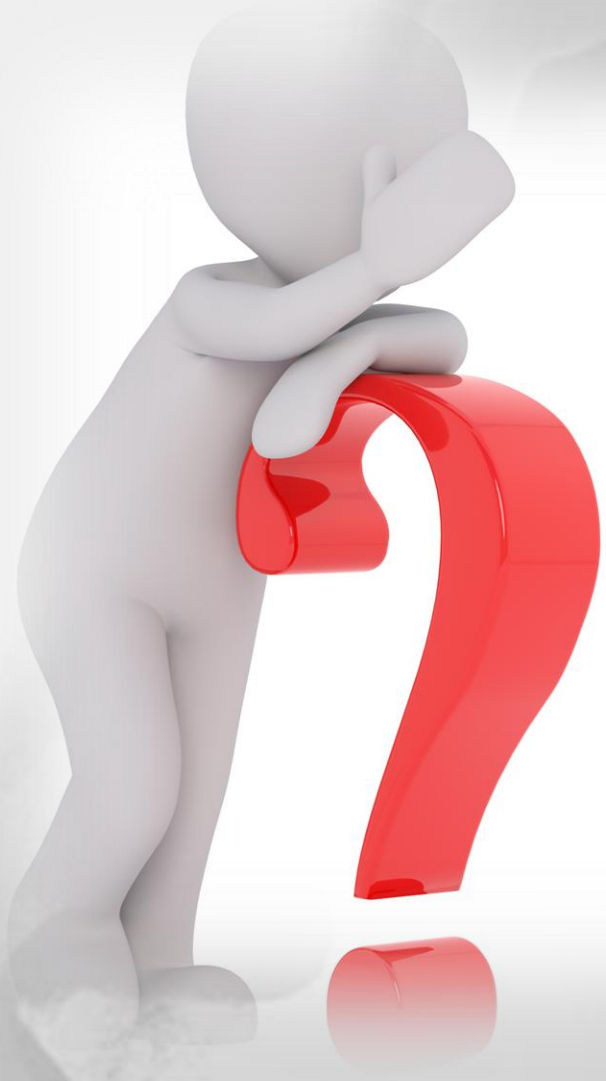
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TS 25108 CONSIDERATIONS



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ISO 9712 / TS25108 Considerations for E learning



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Guidance for use of web-based training,
distance learning, simulation and virtual
reality

CAP 1933 First Published Oct 2020

Published by the Civil Aviation Authority

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use the most up to date version and use it in context so as not
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CAP 1933

Provides guidance in line with UK Regulation to support the introduction of Training procedures and associated quality systems & provide agreed standards for:

- Web-based training (WBT)
- Distance learning
- Use of Simulators
- Synthetic training aids
- Virtual reality



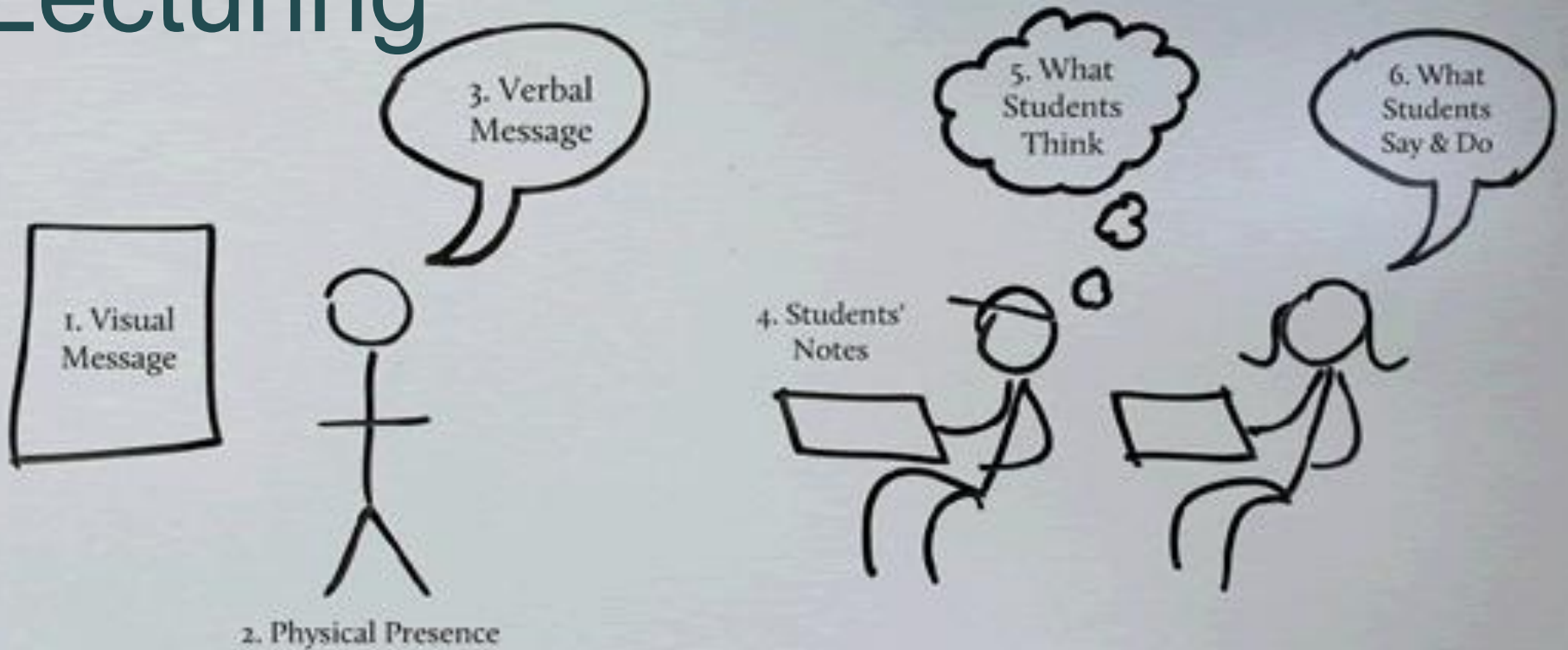
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Lecturing



Instructor led (face to face). The practice of face-to-face delivery of training and learning material between an instructor and students. This usually forms part of “synchronous learning”.



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Synchronous Learning

Instructor and students interact at the same time (real time). i.e.

- Traditional classroom sessions, presentations, symposiums.
- Both classroom-based and distance learning training may be carried out using this teaching method.



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Asynchronous Learning



Instructor and students DO NOT interact at the same time. i.e., Instructor assigns the student work which they complete at a later point in time.

Often seen as assignments within specific course work.

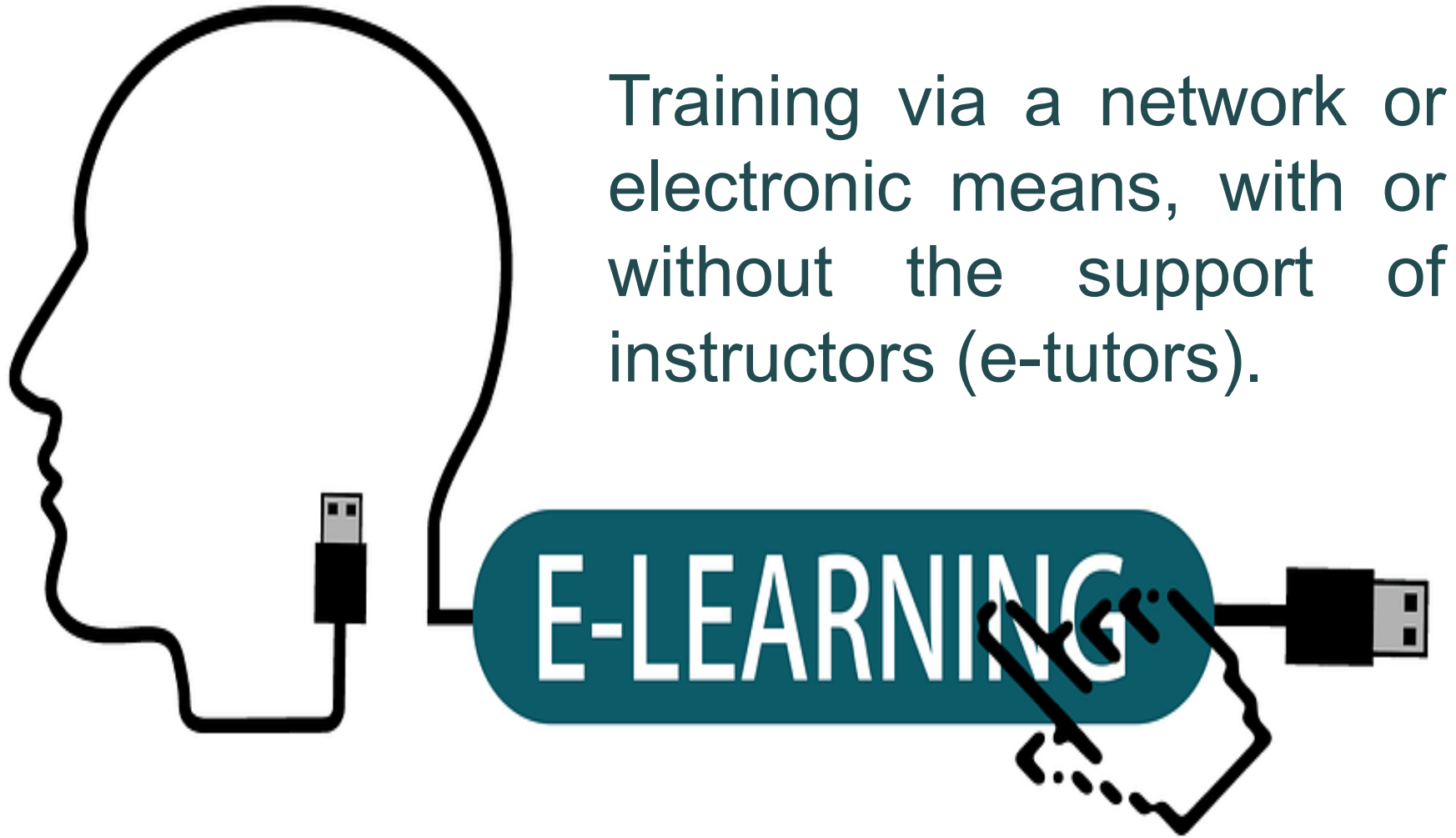


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Training via a network or electronic means, with or without the support of instructors (e-tutors).

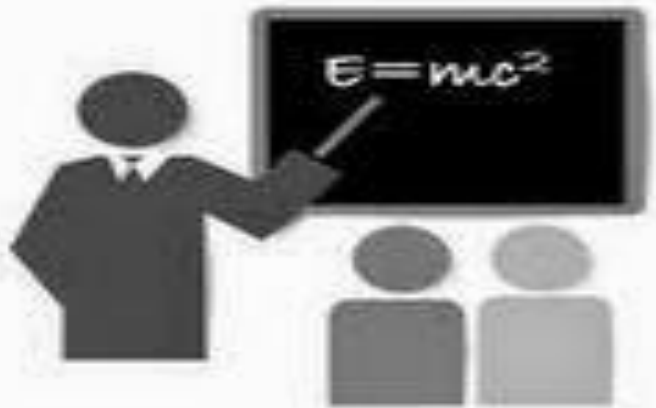


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**face-to-face
classroom learning**



online e-learning

A mix of learning methodologies used to deliver a course. i.e., a mix of classroom and online distance learning sessions used to deliver course material.

This MUST be reflected in the course syllabus with a clear breakdown as to which methodology is applied to which subject chapter.



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Mobile learning: learning that happens when the student is not at a fixed, predetermined location, using mobile technologies.

Computer-based training: CBT is any interactive means of structured training using a computer to deliver a content.

Virtual learning environment: A system that offers instructors digitally based solutions aimed at creating interactive, active learning environments.

VLEs can help instructors create, store, and disseminate content, plan courses and lessons and foster communication between student and Instructor (in the form of e-mails, discussion forums and, real time),



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Image credit - <https://www.hrconnect.cl/desarrollo/software-aprendizaje-formacion-potencia-learning-management-system/>

LMS

Learning Management Systems



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LMS

Learning Management Systems

LMS: Platform utilising a software program that helps to

- Assign / onboard students
- Create, manage, change, deliver and grade eLearning courses.



Image credit: https://scherlund.blogspot.com/2013/06/how-to-choose-right-learning-management_17.html



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GoToMeeting
by **CITRIX**



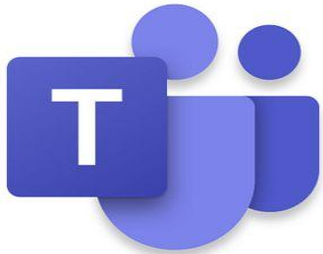
Video Conference via
zoom

web-based systems
should be:

Private and secure from external
access.

Participants should be able to fully
interact with their instructor

Hear any audio and ask any
questions relating to the subject.



Support: Instant Messaging (IM) chat function or service, so that questions
can be asked openly or privately, without interrupting the instructor



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Session delivery



Users will be invited to attend sessions via a dedicated secure link which utilises a Meeting ID and password to log in, where required

The ATO will maintain access to any session for the purposes of ensuring continued oversight and compliance. This may be done by invitation to the session, defined login or other such means that permits full access.

Students must always have their camera on and be in a location and time zone that is conducive to learning.



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Maximum No of Participants

- **CAP 1933 Confirms:** Industry partners would ideally like no more than **20 students per session**, due to the increased difficulty for students to ask questions and interact with their instructor during the sessions.
- **Additional factors for consideration:**
 - Strength of the **internet connection** must be enough to support the class size, from both the ATO's and student's perspectives.
 - The **software** must be capable of supporting the class size.
- **How will the ATO monitor student engagement.**
 - Will this be done by the instructor or the package?
 - Will candidates be supported by additional staff members in ensuring all students remain on camera and engaged?



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Quality oversight

Prior to any application to BINDT for online training, ATOs shall have fully audited and tested the processes, procedures and platforms to be used, ensuring the proposed course meets ISO 9712 and TS 25108 requirements.

BINDT provided with access to courses & student details for future audit purposes as well as dropping into delivered sessions for the recording of findings / observations.

Image credit: <https://researchleap.com/development-quality-management-system-iso-9001>



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Simulation:



Image credit <https://www.stengg.com/en/defence/training-and-simulation/>



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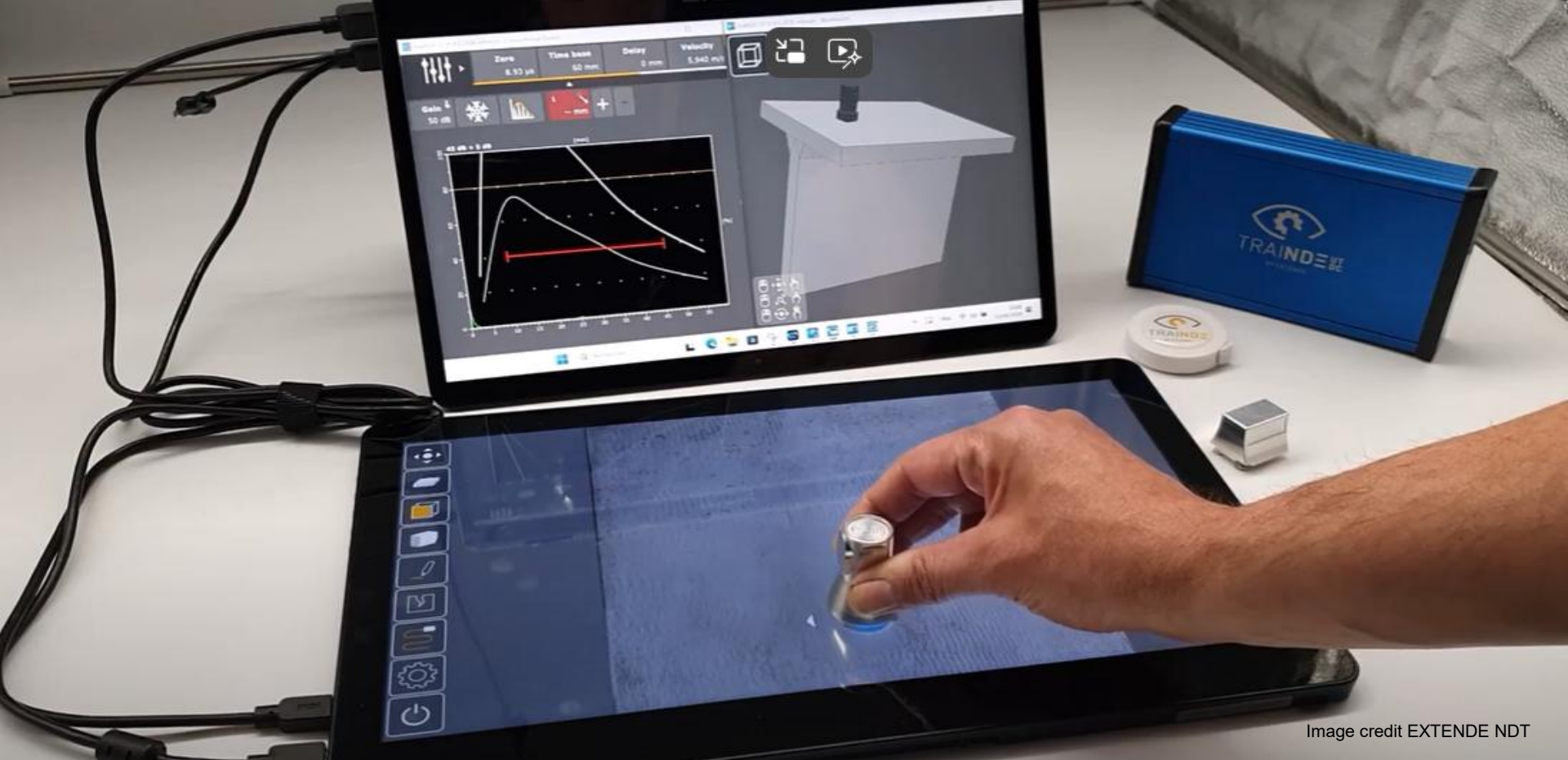


Image credit EXTENDE NDT

Synthetic training devices



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Virtual reality



Image credit <https://www.miplsolns.com/virtual-augmented-reality-simulations.php>

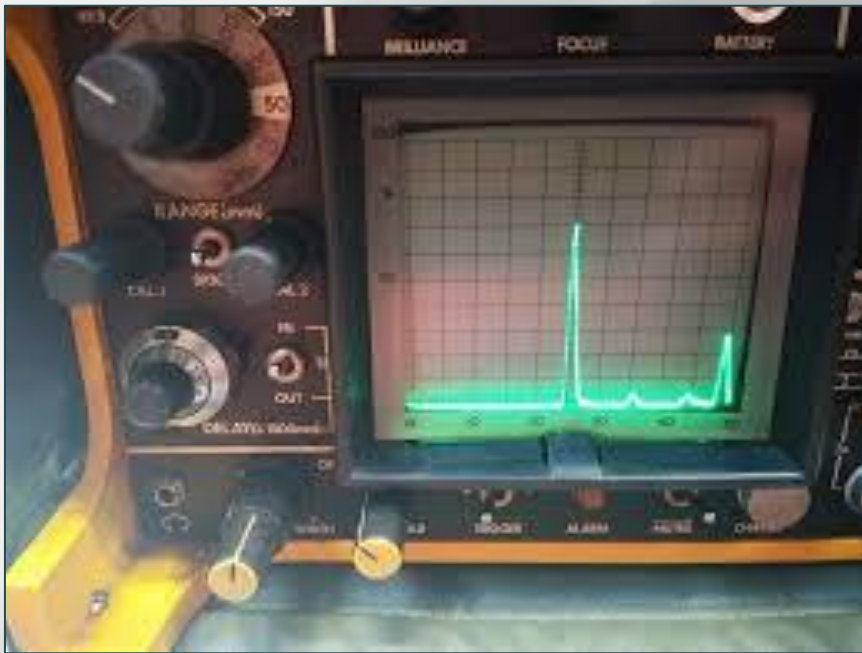


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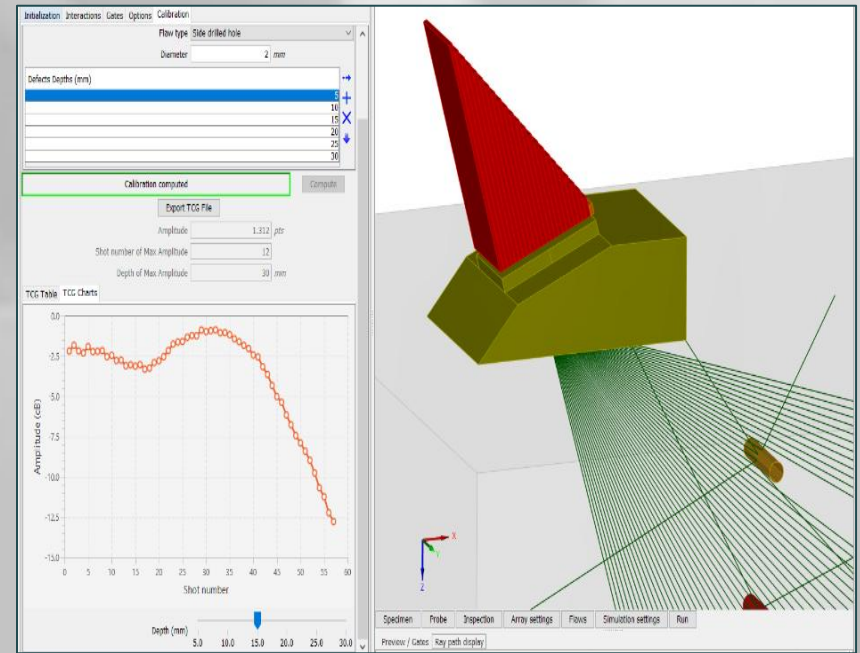


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Sonatest UFD 7A



Simulation

CAP 1933 confirms: The maximum permissible use of VR for training purposes shall be $\leq 50\%$.



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Consider



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PCN/24 Scheme Governance



UKAS is the National Accreditation Body for the United Kingdom. Appointed by government, to assess and accredit organisations that provide services including certification, testing, inspection, calibration, validation and verification of processes.

Help



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WILKINSON
COUTTS

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Product technology
for NDT Technicians

Click here to enrol

LIVE



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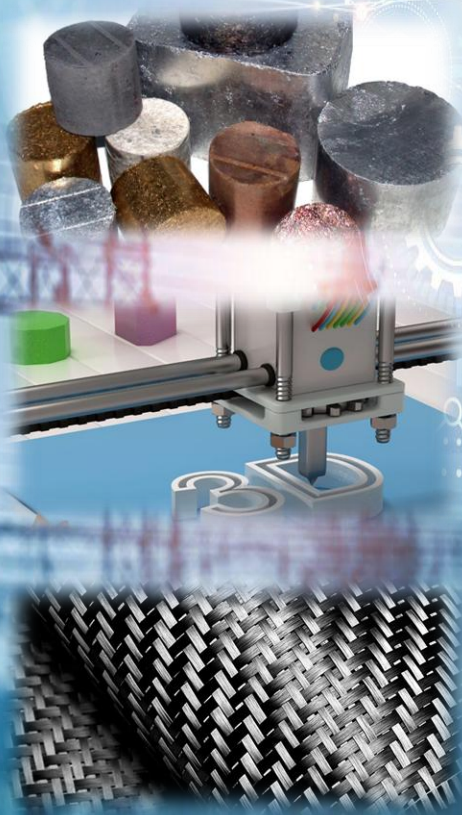
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Industry led syllabus development

Metals

Additive
Manufacturing

Non-metals



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ISO 9712 knowledge requirement

Products and materials.

Fabrication process.

Defects:

- During manufacturing / in-service conditions.

Correct selection of NDT method & technique to reveal the required discontinuities.

Pre- and in-Service industry sector – which includes manufacturing.



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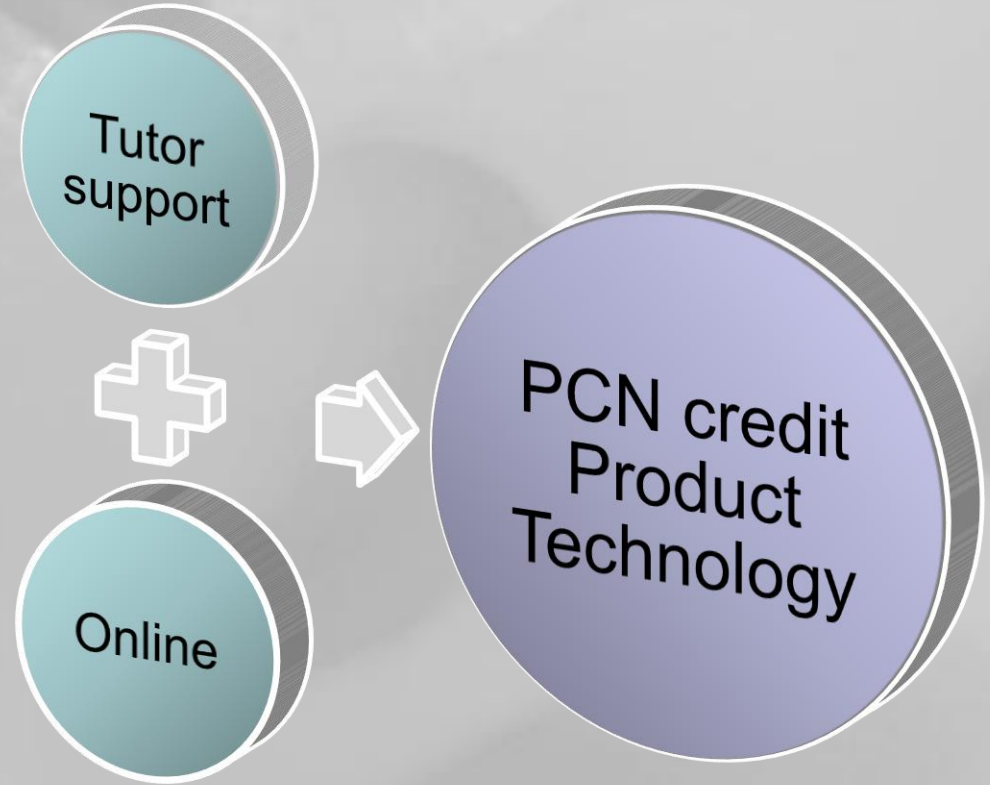
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Online self-study / Blended learning



Image credits - Microsoft.com



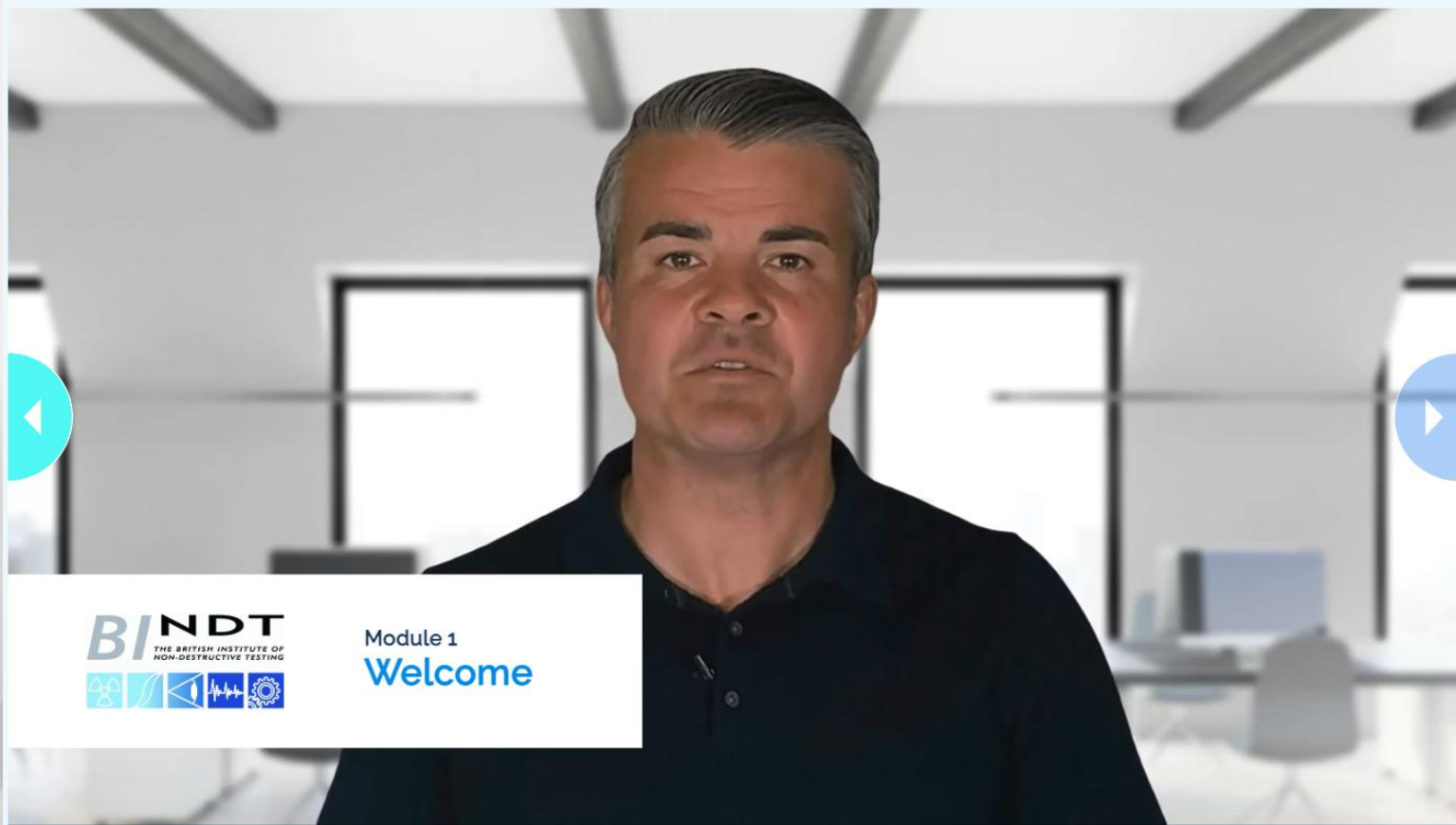
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Video presentations



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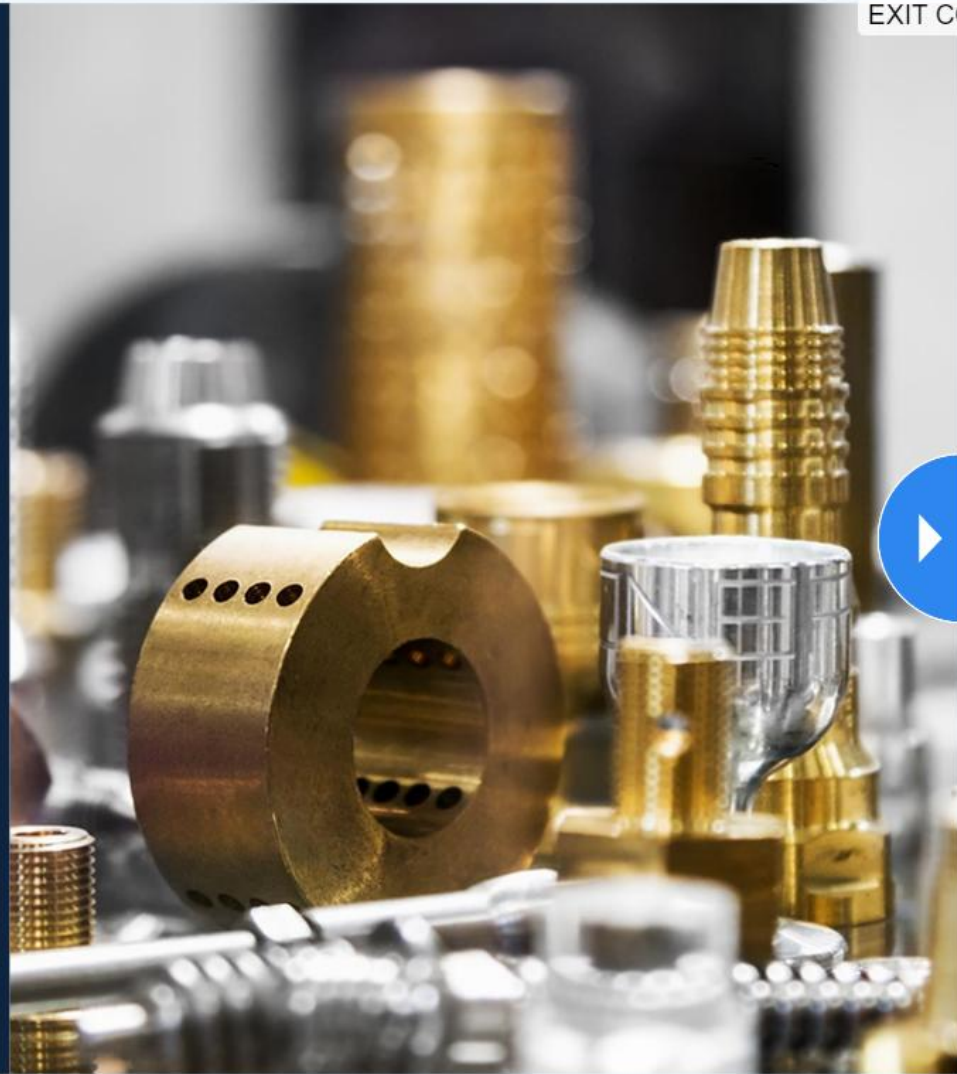
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Module 1

Engineering materials

The term '**engineering materials**' applies to a broad range of materials, primarily encompassing metals and solid plastics that exhibit adequate strength at ambient temperatures. The focus of this course will pertain to the above materials and the techniques employed to change them or modify their characteristics to enhance their practical application.

Select the forward arrow to continue.



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Module 1

Question 1

Let's see how much you have learned so far. Simply drag the images on the right on to the panel that you think it associates with then click submit to see if you're correct.

Extrusion

Casting

Rolling

Forging

Submit

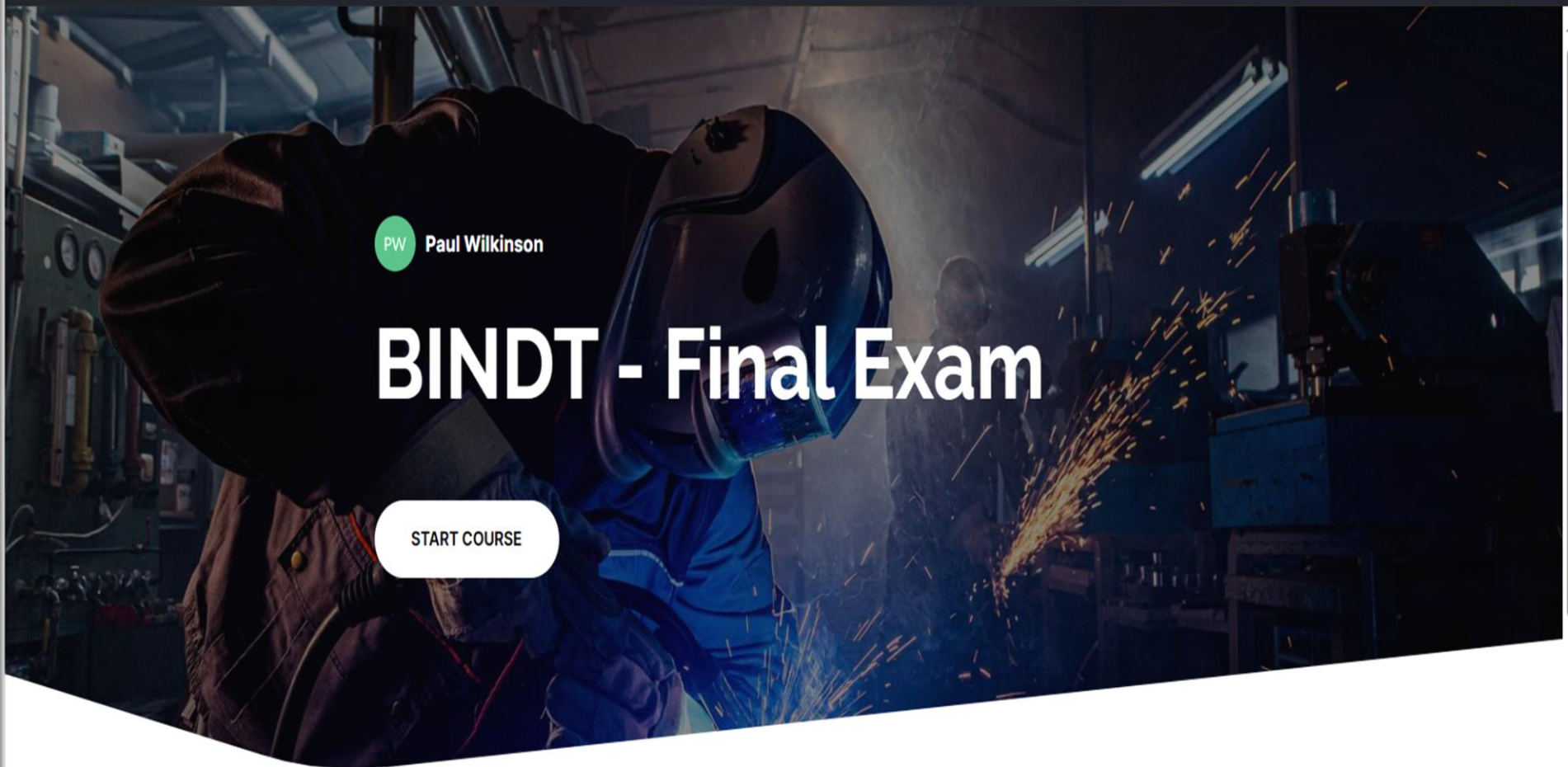


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PW Paul Wilkinson

BINDT - Final Exam

START COURSE



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Certificate of Training

awarded to


Arthur Jones

who has successfully completed the BINDT online training course detailed below.

This training course is devised to meet the requirements of BS EN ISO 9712:2022 clause 7.2.3.

Materials & Manufacturing Processes in NDT

For and on behalf of the British Institute of Non-Destructive Testing



Jennifer Cook (BINDT Certification Manager)

Date: 3 April 2025



Course completion date:

Course duration: 24 hrs

Certificate number:



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Thank you for your time, any questions?



BINDT PCN Scheme contact:

Patrick.boulton@bindt.org

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