

# Course Information Form (additional guidance and model answers)

This is a PDF sample version of the online Course Information Form, containing additional guidance and model answers to assist Pledgers with completing the form.

Guidance and model answer text are in *dark blue italics*.

# **Course Title**

Start by typing in the title of the course. This field is outside the main part of the Course Information Form, so it has been occasionally overlooked. If you haven't typed in the title, your course will appear as '(no title)'.

General

Course ID

The course ID as assigned by the system.

This will be a four-digit number, automatically generated.

### Course provider

Select course organisation.

<Drop-down menu, with an alphabetical list of all registered Pledger organisations>

Your organisation should appear on this drop-down list, as you will need to have registered to be able to create a new Course Information Form.

# Course contact

This will be automatically populated with the name of the Pledger's main contact when you select your organisation in the 'Course provider' drop-down menu, above. You can manually over-write this and provide a different name, if you wish to nominate a different contact for the course. The course contact will be responsible for communicating with the DTTI Quality Check team and answering queries during the Quality Check process.

### Course contact email

*This will also be automatically populated with the Pledger contact's email address – and can also be over-written, if you wish to nominate a different course contact.* 

# **Course Fee**

Please indicate whether the course is a paid course or free of charge.

O Free course

O Fee applied

This information will appear on the DTTI website. We do not include specific pricing information on the DTTI website, as prices may change from year to year – however, you



may wish to direct prospective learners to a pricing information page on your website (e.g. via the 'Apply Now' link, below).

# Total hours of learning

How many hours of learning does the course contain in total?

(Note that to be published on the Deep Tech Talent Initiative platform, the course must contain at least 50 hours of learning, or at least 25 hours if aimed at learners under 18.)

Write a simple numerical figure in the box: e.g. **60**, **300**, **2500**. This number of total course hours will appear on the DTTI website.

The course hours figure should be the total number of learning hours in the course, both contact hours (if the course contains synchronous teaching) and hours for independent learning and assessment (e.g. for online content and tasks).

Make sure your course meets the mandatory minimum hours before you start filling out the Course Information Form; we have had some course applications below the minimum threshold, and these courses have not been accepted.

A few other course applications have given inconsistent information about course hours in later free-text boxes (e.g. the 'Course Description' and 'Course Structure' boxes); any inconsistencies like this will lead to follow-up queries during the Quality Check.

# **Course Provider general URL**

Please provide a link to your website home page, or to a relevant landing page on your website from where users can access course information.

Copy and paste the URL into this box. This link is for Quality Checkers to visit your website, if necessary, to access information not included in the Course Information Form.

# Apply now (link)

Please provide a link to a page on your website where learners can either apply online or access instructions and contact details to be able to apply for the course.

Copy and paste the URL into this box. This link will appear as a button on the DTTI website, which prospective learners can select to apply for the course. If your course has an online application form, you should direct learners there. If learners cannot apply online, direct them to a page that tells them how and where they can apply to the course.

# Certificate provided

Do learners who pass the course receive a certificate, qualification, credits and/or any other formal record of achievement? (Note that to be published on the Deep Tech Talent Initiative platform, courses must provide learners with some form of achievement record if they pass the course. The next question below asks you to select which types of recognition are provided, physical and/or digital)

O Yes

O No



This is a mandatory criterion, so you will need to tick 'Yes' for the course to be accepted. The certificate does not have to be a physical paper certificate – there just needs to be a formal recognition when learners complete and pass the course.

# Course certificate type

Which types of certificate and/or qualification are issued to learners who pass the course?

Tick all answers that apply. If 'Other', please indicate the certificate/ qualification type in the text box.

- **D** Certificate of Achievement from the Course Provider
- Academic Qualification

■ ECTS (European Credit Transfer and Accumulation System) credits that can be put towards an Academic Qualification

- Professional Qualification
- Digital Badge
- Other

You will need to select at least one certificate type. A small number of course applications have omitted to answer this question, leading to follow-up queries.

Course certification type - other

# **Course certification**

If the course is certified by an official body, please enter the title of the certification (e.g. 'EIT Label').

Some courses may be certified (or otherwise recognised) by governmental agencies, universities or other partner organisations. For example, some courses on the DTTI website have been quality-assured by the European Institute of Technology and received an 'EIT Label' (a separate process from the DTTI Quality Check). If the course is independently certified, simply write the name or names of the organisation(s) in the free-text box. If it is not applicable, you can just write 'n/a' in the box or leave it blank.

Descriptions

# Course format

<Drop-down menu, with the following three options>

- On-site
- Online
- Hybrid (partly on-site, partly online)

This information will be given under the 'Course details' on the DTTI website. The 'on-site' and 'online' options should be chosen only if the course is 100% in-person or online. If there is any element of both delivery modes, however small, you should select the 'Hybrid' option.



# Countries

In which country or countries will the course be available?

If the course is delivered in specific countries (rather than Europe-wide), please choose the 'Select countries' option and list each country in which the course will be delivered in the text box below. If the course is delivered across Europe, you can select the option 'All countries' rather than listing each one.

- O Select countries
- O All countries

This information will be given under the 'Course details' on the DTTI website.

Selecting specific countries is most relevant if the course delivery is on-site or partially on-site in a particular country/countries – or if there is any other restriction meaning that only learners resident in particular countries can do the course (e.g. for legal or funding reasons). If so, use the 'Select countries' button and add further details in the next field.

If the course is online and open to learners in any country, you can select the 'All countries' option, and move on to the next question.

Select countries

<Drop-down menu, with an alphabetical list of all UN-recognised countries; multiple countries can be selected>

This drop-down menu will only appear if you click 'Select countries', above. You will need to select countries individually from the drop-down menu, and they will then appear in the 'Select countries' box (as in the screenshot below). If you wish to remove country selections, click on the 'x' to remove them or click 'Reset countries' to clear the box entirely.

Select countries		
× Albania	× Belgium × Cyprus	

# Venue

If the course is delivered on-site or in a hybrid format, please indicate in which city or cities the on-site elements of the course will be delivered. (If the course is online, please say 'Available anywhere', or if it is available in many different places, you can put 'Multiple venues')

*This information will appear under the 'Course details' on the DTTI website.* 

It is most relevant for on-site courses or hybrid courses with an in-person component. Simply write the city or town in which the in-person element is delivered; there is no need to provide a full address. E.g. **Vienna, Lyon, Bratislava**, etc. If there is a specific city/ venue, you should also have selected the relevant country or countries – the country and city/ venue will need to be consistent.

You can give several cities/ venues, but if there are more than five, you can simply put '**Multiple venues**'. If the format is 'online', please write '**Available anywhere**' in this box.



# **Course Description**

Describe the course for prospective learners. We recommend aiming for a description of between 200 and 500 words, depending on the scope of the course.

Your course description should cover some or all the areas listed below. You can see examples of other course descriptions on the Deep Tech Talent Initiative 'courses' page here: <u>https://www.eitdeeptechtalent.eu/courses/</u>.

- Purpose and aims of the course
- Which learner audience(s) the course is aimed at
- Key knowledge and skills learners will develop from the course
- Overview of course structure and syllabus, in particular the 'deep tech' elements of the course (e.g. module breakdown; main topics covered; deep tech relevance)
- How the course is taught and assessed
- Any practical information that you wish to highlight: e.g. course duration, location, format, fee, etc. (Practical information will be provided under 'Course details' but it can be useful to include key points in the course description as well)

Note that you can include formatting, such as sub-headings and lists, in the course description.

The 'Course Description' is the most important field for explaining the course to prospective learners. The bullet-point list of key points to cover (in the instructions, above) has been compiled from a review of multiple course descriptions on the DTTI website.

For courses of 50–100 hours, a shorter description of 150–200 words should be enough. At the other end of the spectrum, degree courses of several thousand hours may wish to provide more information about the course structure, modules and so on.

The following are sample descriptions of two courses on the DTTI website that cover the key points well:

### A 75-hour online professional training course (179 words):

This project-based course is tailored for applicants who possess a strong background in programming and database administration and are looking to expand their knowledge and skills in the field of data engineering. The course is focused on providing trainees with the knowledge and practical experience they need to effectively design and implement ETL (Extract, Transform, Load) pipelines in Data Engineering projects. Throughout the course, trainees will learn about essential data engineering concepts, data warehousing architecture, data sourcing, metadata management, data integration, and also the advances of Generative AI and LLM (Large language Models). They will also gain hands-on experience in building ETL pipelines using popular tools such as SSIS and Talend. The course emphasizes a project-based learning approach, where students will have the opportunity to work on real-world data engineering projects, allowing them to apply the knowledge they have gained in class to real-world scenarios. Additionally, students will also have the chance to participate in data analytics hackathons, which will enable them to put their newly acquired skills to the test by solving real-world problems using data engineering techniques.



#### A 2300-hour postgraduate course (295 words):

The Executive MBA on Automotive Management prepares executives and high potentials for the demands of the global economy and focuses on the areas of production, logistics and Industry 4.0 in the automotive industry. A particular added value are the excursions to companies in the renowned automotive industry or its suppliers, such as in the Stuttgart region. In addition, participants regularly get in touch with opinion leaders from the automotive and supplier industries at expert discussions and business talks.

Next to modules on **management & technology essentials** and **leadership & organizational behavior**, students get **deeper insights into the structure and processes in the automotive and supply industry** to be able to perceive holistically the specialties, problems, methods and upcoming trends of production and logistics in the automotive industry. They can recognize business activities as processes and apply the managerial principles of process management. They are able to evaluate current development and visualize/predict future trends. A special added value in our program are the **excursions** to companies in the well-known automotive industry or the associated supplier industry, e.g. in the Stuttgart region. In addition, you will regularly receive insights from opinion leaders in the automotive and related supplier industries as part of **fireside chats**.

#### **Key Learnings**

- Deep insights into the structures and processes in the automotive and supplier industry
- Know-how for the goal-oriented management of your company or organization
- Decision-making competence in management and new technologies
- Strengthening your leadership personality

- Exchange of practical knowledge & expansion of your automotive network with international participants and lecturers

- Current research results from TU Wien & Fraunhofer Austria

#### **Duration & Structure**

45 teaching days in 3 semesters with regular start in October; classes are taught in a blocked format on weekends, usually 8 hours/day; start in March (summer semester) is possible

# Short Course Description

Provide a short description of the course. We recommend making this between 30 and 50 words.

This short description will appear underneath the Course Title when prospective learners open the course page, so will be the first thing they read about the course. You can see examples of other short course descriptions on the Deep Tech Talent Initiative 'courses' page here: <u>https://www.eitdeeptechtalent.eu/courses/</u>.

The short course description and full course description should be complementary. The short description should capture the essential purpose, deep tech relevance and benefits of the course. The longer description (above) will then expand on what the course is about, who it's for and what the benefits are of taking it.



The 'Short Course Description' appears directly underneath the title of the course, when prospective learners click into the individual course page. It needs to give a brief summary of what the course is about, leading into the fuller course description and course details that will appear lower down the page.

*Here are three example short course descriptions taken from the DTTI website:* 

- A project-based data engineering course designed to teach fundamental concepts and techniques for automating data collection, preparation, and transforming it into clean data ready for in-depth analysis (**27 words**)

- The CAS is aimed at specialists and managers who want to acquire future-oriented digital skills in the area of collaboration and management of construction projects or entire sites. (**28 words**)

- The integrated scaling program for DeepTech, featuring Tech Talent Insights (TTI), empowers DeepTech companies to expand efficiently while optimizing talent management. It covers strategic planning, data-driven recruitment, talent development, and innovation culture, aligning technology innovation with effective talent strategies for maximum growth potential. (**43 words**)

### Learner pre-requirements

Describe whether there are any pre-requirements learners have to meet (and if so, what they are) (e.g. academic qualification, prior work experience, etc.)

This field will not be shown on the DTTI website, so if there are any pre-requirements that prospective learners need to know about, these should be included in the 'Course Description', above. This field should be used to provide more precise information on pre-requirements for the Quality Check team. If there are no pre-requirements, simply write 'n/a'.

Example of pre-requirements for a postgraduate course:

The students should have at least 80 ECTS during the BSc level. Preferably students who have completed BIO-1007 Kvantitative metoder at BSc level.

# **Application process**

Describe briefly the process by which individual learners can apply for the course (e.g. through an online application link or other route).

If the course also accepts organisational or group bookings, please also describe briefly the process by which organisations or groups can apply.

This field will not be shown on the DTTI website, so if there are any application instructions that prospective learners (or groups) need to know about, these should be included in the 'Course Description', above.

*This answer can be brief if there is a simple process to follow, e.g. 'Via online application form'. Or you may wish to link to a page on your website, if the process is more complicated.* 

The main purpose of this field is to address an issue that Quality Checkers found with some course applications, where it wasn't clear how learners could register for the course (either from the Course Information Form or the Pledger's website), necessitating follow-up queries.



# Learning objectives

Provide a bullet list of the course learning objectives.

Aim for between three and eight learning objectives, depending on the size and scope of the course.

At least one of the learning objectives should refer to the deep tech elements of the course: what knowledge and/or skills learners will develop in relation to deep tech.

We recommend that you use 'action verbs' to express the learning objectives, such as those employed in <u>Bloom's Taxonomy of Educational Objectives</u>.

This field will not be shown on the DTTI website, so you may also wish to incorporate Learning Objectives information into the 'Course Description', above.

The LO list is important for helping Quality Checkers assess the appropriateness and relevance of the course for the DTTI.

Articulation of LOs has been one of the weaker features of some course applications; therefore the instructions above have been strengthened to clarify how to format LOs, the type of language and grammar to use, and the importance of including 'deep tech' elements of the course in the LOs.

The following is an example list of LOs from a course on the DTTI website.

- Analyze and solve problems in quantum physics using both exact and approximate methods
- Learn numerical and simulation techniques to solve many-body quantum physics problems
- Identify the appropriate physical systems to implement quantum technologies
- Design and test algorithms which can be used in quantum computers
- Use quantum protocols to code and transmit information in a secure way
- Learn and apply condensed matter theoretical tools for quantum applications

### **Skills addressed**

Please specify any key skills covered in the course. List your keywords, separated by semicolons. We recommend using the European Commission's <u>ESCO Taxonomy</u> for describing skills and competences.

This is an optional field – and you can cover 'skills' elsewhere in the form. However, this field may be useful if you wish to emphasise the skills aspects of the course, as it does appear to prospective learners on the DTTI website.

The ESCO Taxonomy has various useful categories and sub-categories, under the broad headings of 'knowledge', 'language skills and knowledge', 'skills', and 'transversal skills and competences'.



# Images

Course images appear prominently at the top of the course pages in the course catalogue (see example below). You can use the 'Preview' button in the Course Information Form to test how different images will look on different devices.



#### Home > Courses Big Data and Artific

Big Data and Artificial Intelligence for Environmental, Ecological and Biological Science: An Introduction

The 'Big Data and Artificial Intelligence for Environmental, Ecological and Biological Science: An Introduction' course, code 800–3032, unfolds in a structured multifaceted approach to facilitate a profound understanding of Big Data and Al, emphasing their jovedar roles in ecological and biological sciences. He encompasses 10 ECTS, strassilati pa a comprehensive 300 hours of studient engagement across various learning modalities, thoughtfully designed to catter to diverse learning preferences and pronote an inclusive exclusional environment.

Provided by: UiT The Arctic University of Norway

🗗 Apply now

# Featured Image An image illustrating the course. <Add image button>

Header image (desktop) An image illustrating the course. <Add image button>

Header image (mobile) An image illustrating the course. <Add image button>



# Categorization

# Deep Tech fields covered

Please select the Deep Tech categories with which your Course most closely aligns. Select all answers that apply. (Note that any course published on the DTTI platform will need to be aligned with at least one of these categories.)

- □ Advanced computing / quantum computing
- Advanced manufacturing
- □ Advanced materials
- □ Aerospace, automotive and remote sensing
- □ Artificial intelligence and machine learning (including big data)
- □ Biotechnology and life sciences
- Communications and networks
- Cybersecurity and data protection
- **D** Electronics and photonics
- □ Internet of things (IoT), World Wide Web Consortium (W3C), semantic web
- Robotics
- □ Semiconductors (microchips)
- Sustainable energy and clean technologies
- □ Virtual reality, augmented reality, metaverse
- **U** Web 3.0

For more guidance on what types of technologies are covered by the 15 categories above, you can refer to the <u>What is deep tech?</u> page on the DTTI website.

Most courses on the DTTI website were not designed originally to be 'deep tech' specific courses. However, all courses need to show a consistent engagement with deep tech to be suitable for the DTTI; and the deep tech elements need to be fully integrated into the course design, teaching and assessment. Some courses have not been accepted because the deep tech was not integral to the course (it was either too small a part of the course, or too tangential to the learning objectives). And many courses have required follow-on queries because they did not explain the deep tech relevance of the course clearly enough in the 'Course Description', 'Learning Objectives' and other fields.

Many courses also focus on the 'innovation and entrepreneurship' aspect of deep tech. This is valid, but there needs to be evidence that the 'innovation and entrepreneurship' are applied to one or more of the deep tech fields above. Some course applications have not linked the entrepreneurship skills clearly and sufficiently to deep tech, and in these cases, Quality Checkers have sometimes had to go through two or three iterations to bring the application to a level that could be approved for DTTI.

# Course language

<Drop-down menu, with an alphabetical list of EU official languages; multiple languages can be selected>

You will need to select languages individually from the drop-down menu, and they will then appear in the 'Course language' box (as in the screenshot below). If you wish to remove language selections, click on the 'x' to remove them.



Course language

× Czech × Dutch

# Target audience

Please specify the main target audience for this course. (If the course is aimed at various groups of learners, you can select multiple audiences.)

- Upper secondary school learners
- Undergraduate-level learners
- D Postgraduate-level learners
- Professional development learners
- □ Life-long learners

Courses designed to be taught in schools, colleges or universities are likely to have just one category of target learner from the five above. Training courses for professionals and/or life-long learners are more likely to span multiple categories.

Answers to the 'Target audience' question should be consistent with the 'EQF Course Level' and 'Course type' questions below – Quality Checkers have had to query inconsistencies across these questions on a number of course applications. For example, a course targeted at 'undergraduate-level learners' should logically be at 'EQF levels 4-6' (the equivalent of undergraduate-level study), rather than EQF 3 (secondary school) or EQF 7-8 (postgraduate).

# Dates

# Course delivery pattern

How many times per year will the course be run?

- O 1–3 times per year
- O 4–12 times per year
- O Continuously available
- O One-off course

Most university courses have fitted into the '1–3 times per year' category (e.g. degree courses with one or two start dates per year). Professional training courses have tended to be offered more frequently.

Where courses are available on request (e.g. for group bookings), the 'Continuously available' option will probably be most appropriate, unless there are regular, fixed start dates. Some DTTI courses have been one-off courses (e.g. hackathons), though these have been in a minority.



# Course scheduling

When or how often can learners register and start on the course? Please indicate which of the following options best describes your course.

(If the course has fixed start dates, please provide the relevant Start and End Dates, and application deadlines, under the next question.)

- O Fixed start dates
- O Ad hoc or flexible start dates (can be arranged on request)
- O Regular, frequent start dates (once a month or more frequently)
- O Course continually available (start at any time)
- O Fixed start dates (with upcoming dates still to be confirmed)

For courses presenting 1–3 times per year, the 'Fixed start dates' option should be selected, and the relevant presentation dates added in the table below. The 'Next course start' is shown underneath the course title in the DTTI course catalogue (see example, below), as it is one of the more important pieces of information for prospective learners.

If the course has fixed start dates that have not been confirmed, the 'Fixed start dates (with upcoming dates still to be confirmed)' can be selected and the dates added to the form later.

Master in Zero Defect Manufacturing for a Circular Economy	S	
💾 Next course start: 2 September 2024		
Provided by: EIT Manufacturing		
🕀 Language: English		
Ourse format: On-site		
() Total learning hours: 3000		
C Bookmark	$\rightarrow$	



# Dates

If you responded 'Fixed start dates' to the question above, please specify the dates for all presentations that you will be offering during the period of the Deep Tech Talent Initiative (i.e. any course presentation starting between February 2023 and the end of December 2025). You can provide dates for multiple presentations: click the 'Add date' button for each new presentation that you wish to include, and further date fields will open up.

	Start date	<calendar menu=""></calendar>
1	End date	<calendar menu=""></calendar>
	Application deadline	<calendar menu=""></calendar>

# <'Add date' button, to add further table rows>

The above table will appear automatically if you select the 'Fixed start dates' option for the question above.

If you wish to input dates for multiple presentations, you need to click the 'Add date' button, and this will generate more table rows, as in the screenshot below.

	Start date	2024-01-22
1	End date	2024-03-27
	Application deadline	2024-01-17
	Start date	
2	End date	
	Application deadline	
	Start date	
3	End date	
	Application deadline	
		Add date



# Quality Check related

# Course website

Please provide a link to the course website if different from the 'Apply now' link given in the 'General' tab.

(If the course already exists; if the course is in development, please indicate when the content will be available to view online.)

If there is a specific course website page, copy and paste the URL here. This is so Quality Checkers can cross-check information on the website if necessary. If it is the same as the 'Apply now' link, just write 'n/a' here.

# EQF Course level

To which level of learning in the European Qualification Framework (EQF) is the course content equivalent?

(Note that DTTI courses must be equivalent to EQF Level 3 or above.)

- EQF 3: relates to the level learners achieve during the final years of secondary school or vocational and skills training at a similar level
- EQF 4-6: relate to the level of learning a learner acquires during their undergraduate studies, with level 6 representing degree level or professional and skills training at a similar level.
- EQF 7-8: relate to learning equivalent to postgraduate studies or highly advanced professional training.

See <u>https://europa.eu/europass/en/europass-tools/european-qualifications-framework</u> for more information.

- O EQF 3
- O EQF 4-6
- O EQF 7-8

Not everyone will be familiar with the EQF levels, hence we have developed the instructions above to clarify them further.

Note that the EQF level should be consistent with the information given about 'Target audience' and 'Course type'. Courses aimed at secondary school learners should be 'EQF 3', undergraduate learners would be 'EQF 4-6' and postgraduate learners 'EQF 7-8'.

Professional training courses and courses for life-long learners are most likely to be EQF 4-6 (e.g. if they are aimed at people with graduate-level education and/or some existing professional knowledge in a deep tech field) or EQF 7-8 (if they are advanced courses for people with postgraduate-level knowledge or with considerable professional expertise in a deep tech field). They are less likely to be EQF 3, as this would be school-level training and probably at too basic a level for the deep tech context.



# Course type

What type of course is it?

- O Academic (higher education)
- O Academic (school)
- O Professional training

Note that the 'Course type' should be consistent with the 'Target audience' and 'EQF level' answers above.

'Academic (school)' courses would normally be EQF Level 3, aimed at secondary school learners.

'Academic (higher education)' should be either EQF Levels 4-6, or EQF Levels 7-8, depending on whether they are aimed at undergraduate or postgraduate learners.

*Professional training courses are also likely to be either EQF Levels 4-6, or EQF Levels 7-8, depending how advanced they are.* 

# Work-based learning

Does the course include work-based and/or practice-based learning?

(If 'no', please tick the 'no' box. If 'yes', please tick all relevant types of learning and/or list them under the 'other' category)

🗖 No

- □ Applied learning at work
- □ Work experience, internship, etc.
- Experiential learning (e.g. lab work, site visits, etc.)
- Other

Work-based learning - other

This question will not appear to prospective learners but is included as a topic of evaluation for the DTTI scheme, given the objectives of the DTTI to develop the deep tech workforce.

# Assessment

How is the course assessed?

Tick all answers that apply.

- **Computer-marked activities**
- □ Activities marked/ assessed by an educator who taught the Course
- □ Activities marked/ assessed by an internal assessor who has not taught the Course
- Activities marked/ assessed by an external assessor

*This question is also mainly for internal evaluation purposes – to analyse the types of course and course assessment in the DTTI portfolio.* 



# Intellectual Property

□ I confirm that the course only contains or uses protected Intellectual Property or copyrighted content and materials that are lawfully granted.

This box needs to be ticked for the course application to be accepted.

# Provision of course and learner data

Various data are required for evaluation of learner numbers and outcomes on courses published on the Deep Tech Talent Initiative platform. Data will need to be provided at the individual learner level, potentially anonymised, and containing information on the completion status of the learner (course started, withdrawn, completed, passed), gender, age group, and nationality.

□ I confirm that the above data will be provided for the purposes of course evaluation and general statistics.

This box also needs to be ticked for the course application to be accepted.

# Provision of further information for evaluation

In principle, are you willing to provide additional information on request for the purposes of course evaluation?

(For example, course-level information about learner satisfaction, employability outcomes, etc.)

- O Yes
- O No

Providing further data is optional, so 'Yes' or 'No' can be selected here.

# External quality assurance

Is the course subject to quality assurance by an external agency or agencies?

(If 'yes', please answer the next two questions about the type of QA agency and agency name(s).)

- O Yes
- O No

The questions about quality assurance are to assist Quality Checkers with taking a risk-based approach to assessing courses for the DTTI.

For courses with existing external QA, the Quality Check will focus more narrowly on the mandatory DTTI criteria and deep tech elements – on the basis that other external QA assessors will have already reviewed the overall course design and delivery.



# Type of external quality assurance

Which type(s) of agency provide external quality assurance for the course?

Tick all answers that apply.

- □ National higher education quality assurance agency
- □ National secondary education quality assurance agency
- **D** Other type of qualification assurance agency

*This question will appear if you select 'Yes' to the question above.* 

We expect that most school and higher education courses will be subject to relevant national QA regimes. Some professional training courses on the DTTI website also have other independent QA certification.

QA agency name(s)

Please list the names of external agencies involved in quality assurance of the course.

*Type in the name(s) of any QA agencies: e.g. Education Ministry of France, Ministerio de Educación y Formación profesional (Spain), etc.* 

# Internal quality assurance: course design

Has the course been designed and approved through a documented quality control process within your organisation?

(i.e. through an internal quality control process)

- O Yes
- O No

This question is also part of taking a risk-based approach to the Quality Check. We would expect that all courses have been through some form of internal QA process during design. Some course applications have selected 'No' to this question, but on further questioning, all Pledgers have been able to articulate some form of QA process.

There is a free-text box below ('Quality control processes') to provide some evidence in support of this answer.

# Internal quality assurance: course delivery

Is the course delivery regularly monitored and reviewed through a documented internal quality control process?

- O Yes
- O No

As with the previous question, we would expect that all courses will undergo some form of evaluation and review during and after delivery. This should also be summarised in the 'Quality control processes' box below.



# Partnerships

Is the course delivered directly by the Pledger organisation or through/ with partners?

- O Entirely by the Pledger organisation
- O Entirely through partner organisation(s)
- O Partly by the Pledger organisation and partly through a partner/ partners

As with the QA questions, this is about taking a risk-based approach to the Quality Check process. There are no issues with courses being delivered in partnership; however, we request more information here as partners will not necessarily have been through the Pledger registration process for DTTI.

Courses delivered in partnership are most likely to be in the 'Partly by the Pledger organisation and partly through a partner' category. This option should be selected even if the partner has only a small role in the course design or delivery.

### Partner names

Please list the names of any partner organisations involved in delivery of the course and describe briefly which element(s) of course delivery they are responsible for.

(Please write the partner name(s) followed by a short description of their responsibilities. Example descriptions: Production of Course Materials; Teaching; Assessment; Learner Support; Evaluation of Course delivery, etc.)

This field will only appear if you indicate that there is any partner involvement in course design or delivery. The following is an example description for a course that uses two partners in delivery. The partner names have been anonymised for this example. For each partner, two or three bullet points are provided to explain their role in delivery.

Partner A:

- practical classes
- students support (communication in messages at educational platform)

Partner B:

- practical classes
- students support (communication in messages at educational platform)
- essay assessment.

### Partner quality review

Please describe briefly how and how often you review the quality of any elements of the course delivered by a partner.

Again, this field will only appear if you indicate that there is any partner involvement in course design or delivery. The following is a thorough description of how partner work is reviewed for a university course that uses multiple partners in delivery:

*We regularly review the quality of course elements delivered by our partners to ensure they meet our standards and expectations. The review process involves:* 



1- Periodic Evaluations: We conduct evaluations at set intervals, typically at the end of each academic term or semester. This ensures that any feedback from students and faculty can be addressed promptly.

2- Feedback Mechanisms: We have feedback mechanisms in place, such as surveys and feedback forms, to gather input from students and instructors about the course content, delivery, and any other relevant aspects.

*3- Committee Reviews: A designated review committee examines the feedback and any other relevant data to assess the quality and effectiveness of the course material and delivery methods.* 

4- Partner Collaboration: We maintain open communication with our partners, discussing the feedback and findings from the reviews. This helps in understanding their perspective and facilitates any necessary revisions or updates.

5- Continuous Monitoring: In addition to the formal reviews, we have mechanisms in place to continuously monitor the course's progress and performance, ensuring immediate action if any issues arise.

# Deep Tech Talent Initiative transversal dimensions

The Deep Tech Talent Initiative also aims to contribute to three 'transversal dimensions' for Deep Tech (below). To which of these dimensions does the course contribute?

Tick all answers that apply.

(Note that if you tick the 'Global challenges / UN Sustainability Goals', you will be able to specify with which goals the course most closely aligns in the next question.) For more on the UN's 17 sustainable development goals, see <a href="https://sdgs.un.org/goals">https://sdgs.un.org/goals</a>

- Innovation and entrepreneurship in Deep Tech context (e.g. training in skills relating to ideation, market validation and verification, business planning, IPR, regulatory environment, etc.)
- Inclusion of women as Deep Tech scientists, researchers or innovators and/or inclusion of the following groups: people from disadvantaged backgrounds; people from minority ethnic groups; people with disabilities; unemployed people reentering the job market
- Global challenges / UN sustainable development goals within the Deep Tech context

This is another question included mainly for the purpose of evaluating the benefits of the DTTI and the contribution of the course portfolio to strategic objectives.



# UN Sustainable Development Goals

With which UN sustainable development goals does the course most closely align?

(If it does not align, please tick the 'None of the categories below' box. If it does align, tick either one, two or three categories.)

Please select at most 3 options.

- □ None of the categories below
- □ No poverty
- Zero hunger
- **Good** health and wellbeing
- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace, justice and strong institutions
- Partnerships for the goals

This question will appear if you select the 'Global challenges / UN Sustainability Goals' option in the 'Transversal Dimensions' question. Most courses applying for the DTTI have some relevance to at least one of the UN Sustainability Goals.

# **Course structure**

Describe briefly (up to 300 words) the course structure.

(i.e. how the course breaks down into blocks of learning or modules)

This question and the next few qualitative questions are designed to elicit evidence to support and elaborate on the multiple-choice information given elsewhere in the Course Information Form. This qualitative information is important for Quality Checkers to make an informed assessment of each course's appropriateness and relevance for the DTTI. The information will not be published on the DTTI website; it is for internal use only.

You may wish to include some of the information about 'Course Structure' in the 'Course Description' field. The level of detail needed for this section will vary, depending on the size and complexity of the course.

The following example is taken from a 300-hour, eight-module course:



The course structure is designed to provide a comprehensive understanding of data science, artificial intelligence, and their implications in today's world. The course is divided into eight distinct modules, each focusing on a specific topic to ensure a systematic learning experience.

Module 1: This module delves into the FAIR principles, emphasizing the importance of making data open, free, discoverable, and reusable. It introduces students to the concepts of data management planning. Furthermore, it underscores the role of big data and AI in advancing the sustainability development goal.

Module 2: An introduction to the essentials of data science, this module lays the foundation for programming using Python, offering students the basic skills necessary to handle data effectively.

Module 3: Data Cleaning is at the heart of reliable data analysis. This module teaches students techniques and best practices to cleanse and preprocess data, ensuring its quality and accuracy.

[In the actual application, further descriptions were provided for each of the other five modules.]

Together, these modules provide a holistic approach to understanding the nuances of data science, AI, and their broader impacts.

# Teaching design

Describe briefly (up to 400 words) how the course will be taught and delivered.

(e.g. how much of the course will be taught directly by a teacher in a live context, how much will be delivered through online content, etc.)

This question is also for internal use only by Quality Checkers. You may wish to include some of the information in the 'Course Description' field.

Two examples are provided below of a long, comprehensive response and a shorter response, which still provided enough information for the purposes of the Quality Check. Note that overly brief responses usually require follow-up queries, so it saves time ultimately to provide full responses to this and other qualitative questions.

# EXAMPLE A:

The delivery and teaching of this 300-hour course ingeniously couple traditional, synchronous formats with asynchronous, digital content, enhancing accessibility and facilitating adaptive learning trajectories.

1. Synchronous, Instructor-Led Sessions (60 hours):

• Lectures (40 hours): Traditional, teacher-led lectures will elucidate theoretical concepts, offering students a robust foundation in Big Data and Al principles, applications, and ethical considerations.

• Flipped Classrooms (20 hours): Interactive sessions where students engage actively with learned concepts, participating in discussions, problem-solving activities, and collaborative explorations, all facilitated by the instructor.

2. Collaborative, Team-Based Learning (40 hours):

• Group Assignments: Students engage in practical applications of course concepts through group projects. While not always instructor-led, the faculty will provide guidance, structured milestones, and feedback sessions to navigate students through collaborative research and problem-solving.



3. Asynchronous, Independent Learning (130 hours):

• Home Assignments, Quizzes, & Individual Tasks (40 hours): Designed to reinforce learned concepts, this independent work will involve varied assignments, facilitated through the course's digital platform. Quizzes may be administered live or asynchronously online.

• Videos, Reading & Exam Preparation (90 hours): Students will navigate through curated digital content, journal articles, and preparation materials independently, directing their own exploratory learning and examination preparation.

[Further information was provided in the actual application]

### EXAMPLE B:

This course seamlessly integrates online modules and hands-on workshops to provide a comprehensive learning experience in statistical analysis.

• Conduct online workshops featuring applied analysis sessions using real-world datasets, allowing participants to practically apply research skills.

• Deliver interactive video lectures covering research methodology components, ensuring participants engage with the content online.

• Establish online discussion forums to encourage collaboration, enabling participants to collectively solve problems and share insights.

• Organize live demonstrations of research software tools, ensuring participants are proficient in online tools for effective data collection and analysis.

• Facilitate virtual group discussions to replicate in-person interaction, allowing participants to share experiences and insights in an online environment.

# Assessment design

Describe briefly (up to 300 words) how the course learning outcomes will be assessed.

(e.g. describe the types of assessment activity, how they will be marked and graded, whether feedback will be provided)

This question is for internal use only by Quality Checkers. You may wish to include some of the information in the 'Course Description' field.

Two examples are provided below of a detailed summative assessment strategy and a shorter description of a more formative assessment strategy, which still provided enough information for the purposes of the Quality Check.

Some course applications have stated that they do not include assessment or only lighttouch formative assessment. To be accepted on to the DTTI, the course will need to include a robust strategy for assessing whether learners have achieved course learning objectives, as this is critical to providing evidence of impact for the overall DTTI.



EXAMPLE A (university module):

The assessments are bifurcated into diverse formats, ensuring a comprehensive appraisal of students' theoretical understanding, practical application, collaborative functioning, and independent research and analytical capabilities.

1. Written Exam (40% of the final grade):

o The written examination will assess students' theoretical knowledge and understanding of big data and Al principles, tools, and applications, particularly in the environmental and biological sciences.

o It will involve a mixture of short-answer, long-answer, and problem-solving questions.

o Grading is done on a scale of A to E (pass) and F (fail), based on predefined criteria, ensuring unbiased and uniform evaluation.

2. Oral Exam (20% of the final grade):

o The oral exam aims to evaluate students' depth of knowledge, their ability to think on their feet, and communicate scientific concepts coherently and accurately.

o The student's understanding of practical applications of AI and big data in real-world contexts will be particularly scrutinized.

3. Group Assignment/Reports (20% of the final grade):

o Students will work in teams on practical projects, applying theoretical concepts to solve real-world problems related to ecology and sustainability.

o Evaluation will be based on the efficacy of problem-solving, application of knowledge, collaborative functioning, and the quality of reports produced.

o Assessment criteria will be provided in advance and will address aspects like the quality of data analysis, adherence to scientific and ethical norms, and the cogency of conclusions drawn.

4. Individual Assignment/Reports (20% of the final grade):

o Individual assignments will offer students a platform to showcase their capability to independently apply learned concepts, perform data analysis, and drive conclusions.

o This will also act as a medium to gauge their proficiency in utilizing various data analytics tools and AI applications.

Feedback Mechanism:

• Constructive feedback will be an integral part of the assessment design, provided at various stages through one-on-one discussions or written summaries.

• For group and individual assignments, feedback will focus on both the scientific content and the communication/presentation of findings, providing students with insights into areas of strength and aspects requiring improvement.

The amalgamation of different assessment formats ensures that students are evaluated through varied lenses, substantiating their learning and competence effectively and inclusively, thereby aligning closely with the learning outcomes articulated for the course. This strategic assessment design not only ascertains academic and practical proficiency but also fortifies the students' readiness for real-world applications in ecological and sustainability science, particularly leveraging big data and Al.



### EXAMPLE B

The course evaluation system for this discipline involves the accumulation of points across various types of educational activities throughout the study period. These activities include lectures, practical classes, independent work, and individual tasks, each assigned a maximum number of points. Lectures carry a weight of 10 points in total, with 2 points allocated per week. Practical classes, on the other hand, contribute a maximum of 70 points, distributed evenly across the 14 study weeks. Independent work is assigned 10 points, distributed across weeks when such tasks are designated. Individual tasks have a total weight of 10 points, with 5 points allocated in specific study weeks. The schedule of the educational process outlines the distribution of points for each type of educational work over the 14-week study period, offering a comprehensive breakdown of the evaluation criteria. Students can accumulate a maximum of 100 points, with their performance assessed based on their engagement in lectures, practical classes, independent work, and individual tasks throughout the course duration.

### Learner feedback, complaints and appeals

Describe briefly (up to 400 words) the processes you have in place for learners to feed back on the course, and if necessary, make a complaint or appeal.

(e.g. learner survey, process for appealing a mark or grade, etc.)

This question is important for ensuring that all DTTI courses have fair, transparent processes for dealing with any issues that may occur for learners.

Two examples are provided below of a long, comprehensive response and a shorter response, which still provided enough information for the purposes of the Quality Check.

### EXAMPLE A:

Ensuring a transparent, constructive, and accessible platform for learner feedback, complaints, and appeals is pivotal in maintaining the integrity and continual improvement of the course 'Big Data and Artificial Intelligence for Environmental, Ecological, and Biological Science: An Introduction' (BIO-3032). The outlined mechanisms ensure that students have clear pathways to express their perspectives, grievances, and seek redressal whenever necessary.

1. Learner Feedback:

• Periodic Surveys: Anonymous online surveys will be conducted periodically and at the end of the course, focusing on various aspects like course content, teaching methodology, and assessment fairness. Custom feedback forms are designed to extract both quantitative and qualitative feedback.

• Focus Group Discussions: A subset of learners may participate in focus group discussions to delve deeper into specific feedback areas, encouraging open dialogue about their learning experience and areas for improvement.

• Student-Teacher Meetings: Open-door policy for students to discuss their concerns, suggestions, or share feedback directly with the educators. Virtual "office hours" will be scheduled for remote students.

2. Complaints:



• Dedicated Complaint Portal: An online portal is established where students can lodge their complaints directly. A ticketing system ensures that each complaint is tracked and addressed systematically.

• Complaint Committee: A committee, comprising faculty and student representatives, addresses the lodged complaints, ensuring impartiality and effective resolution.

### 3. Appeals:

• Clear Guidelines: Detailed guidelines regarding the appeal process against marks, grades, or any other academic decisions are transparently shared with the students at the commencement of the course.

• Appeal committee structure: The appeal committee is structured of two members an interior member from UIT The Arctic University of Norway and a second external member from outside UIT The Arctic University of Norway.

To reinforce the reliability of these processes, periodic reviews are conducted to ascertain their effectiveness and to identify areas for improvement, thus ensuring that they remain robust, fair, and in alignment with the course's educational objectives and institutional policies. The ultimate goal of implementing these mechanisms is to create an inclusive, respectful, and supportive learning environment, fostering a collaborative culture between the educators and learners.

### EXAMPLE B:

At our institution, we value learner feedback as an essential tool for continuous improvement and ensuring a positive learning experience. To facilitate this, we have established a structured feedback mechanism that allows learners to provide input, express concerns, and appeal decisions when necessary.

Learner Surveys: We conduct regular learner surveys at strategic intervals throughout the course. These surveys are designed to capture insights into various aspects of the learning experience, including course content, instructors, materials, and overall satisfaction. Learners are encouraged to provide open and honest feedback, and responses are anonymous to ensure confidentiality.

Feedback Sessions: Periodic feedback sessions or focus groups may be organized where learners can provide verbal feedback directly to instructors or program administrators. These sessions offer a more interactive platform for learners to share their thoughts and concerns.

# Quality control processes

Describe briefly (up to 500 words) the quality control processes for the course design and delivery.

This may include brief descriptions of:

- What checks and approvals the course goes through in the design stage
- How and how often the course delivery is reviewed
- Processes for implementing changes and improvements
- Any external quality assurance processes that the course undergoes

This question is designed for Pledgers to provide evidence to support their answers to the 'Yes / No' questions above about their internal and external QA processes.

Two examples are provided below of comprehensive answers to this question.



# EXAMPLE A:

Quality control is paramount in ensuring the academic integrity, relevance, and efficacy of the course 'Big Data and Artificial Intelligence for Environmental, Ecological, and Biological Science: An Introduction' (BIO-3032). The multifaceted quality control processes integrated within the course design and delivery are meticulously crafted to ascertain that it adheres to high academic and pedagogical standards.

1. Design Stage Checks and Approvals:

• Peer Review: Before formalization, the course design undergoes a comprehensive peer review by internal and external experts in the field, evaluating its content accuracy, relevance, and pedagogical approach.

• Curriculum Validation: The course outline, learning outcomes, and content are validated against national and international standards, ensuring they align with the current industry and academic demands.

• Accessibility and Inclusivity Assessment: The course design is assessed to ensure it adheres to universal design principles, ensuring it is accessible and inclusive for all learners.

• Ethical Approval: All aspects of the course, especially concerning data use and management, are scrutinized for ethical considerations.

2. Course Delivery Review:

• Periodic Observations: Scheduled teaching observations are conducted to ensure adherence to the designed curriculum and effective delivery.

• Learner Feedback: As described previously, systematic mechanisms like surveys, focus groups, and direct feedback channels facilitate real-time insights into the efficacy of delivery from the learner's perspective.

• Continuous Professional Development (CPD): Faculty involved in delivery undergo regular CPD sessions to ensure they remain adept with the current pedagogical strategies and content relevance.

3. Implementing Changes and Improvements:

• Agile Feedback Loop: A system where the feedback from all stakeholders is continuously incorporated into the course design and delivery in a timely manner.

• Curriculum Update Committee: A dedicated committee reviews and approves proposed changes, ensuring that they align with the course's learning objectives and maintain academic rigor.

• Change Log: All changes and improvements are documented meticulously in a change log, detailing the rationale and impact of the alterations.

4. External Quality Assurance Processes:

• Accreditation: The course seeks accreditation from relevant professional bodies, validating its quality and relevance to the wider professional context.

• External Examining: External examiners are involved in assessing and validating the assessment and marking processes, ensuring they adhere to international academic standards.

• Collaboration with Industry Experts: Ongoing collaboration with professionals and experts in the field, engaging them in guest lectures, workshops, and curriculum reviews to ensure real-world applicability and relevance.



International Benchmarks: The course is periodically compared against international benchmarks and best practices to ensure global relevance and competitiveness.

By intertwining these quality control processes within the course's ecosystem, BIO-3032 ensures a dynamic, relevant, and high-quality learning experience that not only adheres to but aspires to set new benchmarks in academic excellence and learner satisfaction.

#### EXAMPLE B:

Our course design and delivery are subject to rigorous quality control processes to ensure that we provide a highquality and effective learning experience for our learners. These processes encompass various stages, from initial course design to ongoing reviews and continuous improvement efforts.

#### Course Design Stage:

Course Development Team: Course design begins with a team of experienced subject matter experts, instructional designers, and educators who collaborate to create a comprehensive course outline and curriculum. This team ensures that the course aligns with our learning objectives and standards.

Alignment with Learning Objectives: Each course is meticulously designed to align with specific learning objectives and outcomes. These objectives are clearly defined and serve as the foundation for all course content and assessments.

*Quality Assurance Review: Before a course is finalized, it undergoes an internal quality assurance review. This review assesses the course for accuracy, completeness, and alignment with educational best practices. Any issues or discrepancies are addressed before the course is approved for delivery.* 

Course Delivery Review:

Continuous Monitoring: Once a course is in session, it is subject to continuous monitoring. Instructors, facilitators, and course administrators regularly assess learner progress, engagement, and feedback. Any issues or concerns that arise during delivery are addressed promptly.

Course Evaluations: Learner feedback is collected through surveys and evaluations at the end of each course or module. This feedback is carefully analyzed to identify areas for improvement. Positive feedback is acknowledged, and constructive criticism is used to inform revisions.

Peer Review: Instructors and facilitators may participate in peer reviews, where their teaching methods, materials, and interactions with learners are assessed by colleagues. Peer reviews provide valuable insights and promote excellence in course delivery.

Processes for Implementing Changes and Improvements:

Feedback-Driven Improvements: Learner feedback plays a crucial role in course improvement efforts. Suggestions, concerns, and recommendations are documented and reviewed by course development teams. Changes to course content, assessments, or delivery methods are made based on this feedback.

Iterative Course Updates: Courses are not static; they evolve over time. Content is regularly updated to reflect changes in the field, emerging best practices, or advances in technology. These updates are informed by industry trends and feedback from learners.



*Quality Control Committees: We maintain quality control committees that oversee ongoing course improvements. These committees consist of experts from various relevant disciplines who meet regularly to review course data, assess the effectiveness of changes made, and make recommendations for further enhancements.* 

External Quality Assurance Processes:

Accreditation and Certification: Our courses may undergo accreditation or certification processes through external organizations and accrediting bodies. These processes ensure that our courses meet industry standards and adhere to best practices in education.

*External Audits: Periodically, external auditors may review our courses to ensure compliance with regulatory requirements and quality standards. These audits provide an objective assessment of our course design and delivery processes.* 

### Management of teaching quality

Describe briefly (up to 400 words) how the quality of teaching on the course is managed.

(e.g. recruitment criteria for teachers/ educators, how they are reviewed, etc.)

This question is designed for Pledgers to provide further evidence about how the quality of teaching is assured on the course.

Two examples are provided below of a long, comprehensive response and a shorter response, which still provided enough information for the purposes of the Quality Check.

### EXAMPLE A:

Management of teaching quality is pivotal for ensuring that the course 'Big Data and Artificial Intelligence for Environmental, Ecological, and Biological Science: An Introduction' (BIO-3032) is delivered with utmost efficacy and pedagogical rigor. This entails strategic planning, effective recruitment, ongoing faculty development, and continuous review mechanisms.

1- Course Originator's Credentials:

• Academic Proficiency: The professor teaching the course holds a Doctoral degree in Sciences in a related field and has an impressive track record of research publications.

• Industry Relevance: The professor's robust and ongoing partnerships with the business sector, combined with active projects, underscore the curriculum's alignment and relevance to contemporary industry practices and trends.

2- Continuous Professional Development (CPD):

• Mandatory Training: The professor undergoes continuous training programs emphasizing pedagogical strategies, inclusive teaching practices, assessments, and the integration of technology in teaching.

• Specialized Workshops: Participation in workshops focusing on emerging trends, novel teaching technologies, and enhancing student engagement is routine.

• Conference Participation: Regular attendance at significant conferences ensures the course remains at the forefront of global trends and research.

3- Feedback and Enhancement:



• Teaching Observations: The course undergoes periodic reviews through classroom observations by academic peers and leaders to assess its efficacy.

• Constructive Feedback: Feedback, both positive and developmental, is crucial to refining and enhancing the course delivery and content.

• Student Feedback Mechanism: Direct channels such as office hours and online forums facilitate real-time student feedback, ensuring any concerns are addressed promptly.

4- Curriculum Integration:

• Curriculum Coherence: Regular reviews ensure that the teaching methods and content delivery remain aligned and synchronized with the overarching course objectives and the latest in the field.

• Innovative Adjustments: Periodic updates to the curriculum are made to incorporate the latest research, tools, and methodologies.

5- Periodic Performance Reviews:

• Self-Appraisals: The professor engages in reflective practices, assessing the impact of teaching methods, research contributions, and further training.

• *Remedial Action: Where necessary, adjustments are made to improve and refine the teaching methods, content delivery, or any other aspect of the course.* 

Through these mechanisms, the teaching quality in BIO-3032 is meticulously managed and continuously enhanced, ensuring that the course not only meets but exceeds the educational and professional expectations of its diverse learner demographic, thereby contributing to the academic and industry relevance of the program.

### EXAMPLE B:

Setting clear expectations:

Clear definition of learning objectives, outcomes and expectations for students throughout the course.

Outline of the evaluation system.

Faculty selection and development:

Selection of faculty with experience in X-ray structural analysis and impedance spectroscopy, ensuring that they have hands-on experience in conducting experiments and interpreting results.

Creating an enabling environment for faculty to engage in research and promote advancement in the field.

Expert review and assessment:

Integration of peer review mechanisms for student projects and presentations related to X-ray structural analysis and impedance spectroscopy.

Encouraging constructive feedback among students.

Student feedback:

Implementation of regular opportunities for students, providing feedback on the course structure, content and teaching methodology.

Laboratory safety protocols:



Establish safety protocols for laboratory work using X-ray equipment and impedance spectroscopy facilities.

Research ethics and integrity:

Acquaintance of students with ethical considerations in scientific research.

# Full, reliable and true information

Your organisation is expected to provide full, reliable and true information relevant to the course, without knowingly withholding and information that might impact on its acceptance on the Deep Tech Talent Initiative platform. The same extends to information given about partners, contractors and subcontractors involved in the training, its delivery or management.

□ I confirm that the information provided about the course is true and correct.

This box needs to be ticked for the course application to be accepted.