

# **Working document Train the Trainer Education summit 2022**

**Session date:** Wednesday 11th May 2022

**Timezone 1** (UTC+8): 17.30 - 22.00

**Timezone 2** (UTC-4): 08:00 - 12.30

## **Contributors to this session**

Alice Matimba  
Dusanka Nikolic  
Nicola Mulder  
Sarah Morgan  
Ben Moore  
Piv Gopalasingam  
Katherine Kaldeli  
Jorge de Batista Rocha  
Liliana Casique  
Oscar Marino Vidal Orjuela  
Verena Ras

## **Contents**

[\*\*Part 1: Virtual TtT Course Curriculum Planning\*\*](#)

[\*\*Part 2: Virtual TtT Course Delivery and Logistics Plan\*\*](#)

[\*\*Part 3: Training Outline/Course Summary\*\*](#)

## **Resources & links**

[Train the Trainer Edu Summit 2022 Outline](#)

[Slides-TtT Edu Summit 2022](#)

[WCS Online FutureLearn Course Resources](#)

[EMBL EBI Virtual Course May 2021](#)

[Template curriculum outline](#)

[Link to learning designer tool](#)

[Delivery Planning working spreadsheet](#)

## Part 1: Virtual TtT Course Curriculum Planning

**Session chairs:** Alice Matimba, Nicola Mulder, Dusanka Nikolic, Sarah Morgan

**Session aims:** during this session we will design the planned [TtT curriculum](#) by expanding on the sections below. We will use this document and [existing resources listed below](#) to populate [the learning designer tool](#)

**Session outcome:** By the end of this session the virtual TtT curriculum will be outlined and content creation initiated. Further work will continue after the summit to refine the curriculum and plan for delivery.

**How this session will run:** Session delegates will work together in a single Zoom session or work offline and return at specific times for discussion. A Slack channel will also be available for interactions.

### Existing resources for reference

[WCS Online FutureLearn Course Resources](#)

[EMBL EBI Virtual Course May 2021](#)

[Template curriculum outline](#)

### Course curriculum

[Course title](#)

[Course goal](#)

[Broad objectives](#)

[Target audience](#)

[Learning outcomes](#)

[Indicative content/proposed activities](#)

[Assessment plan](#)

[Course evaluation](#)

### [Link to learning designer tool](#)

Course Title:

### Course design and delivery for bioinformatics trainers

#### Course goal

Empower scientists focused on genomics and bioinformatics to design, develop and deliver effective training in their field of expertise

## Broad objectives

- Provide instruction, coaching and feedback (theory and practice) to prepare participants to design and deliver training to others effectively in bioinformatics skills.
- Promote participation and involvement using group work and presentation skills
- Promote interpersonal skills, collaboration and networking through community development, mentorship and expert support
- Raise awareness to creation and use of open and accessible training resources
- Evaluate **your** teaching/learning

## Target audience

Applicants will be involved in genomics and bioinformatics, and interested in developing their skills in training others in specific courses.

Individuals planning.....

## Learning outcomes

At the end of the course, trainees are expected to be able to

1. Apply theoretical and pedagogical concepts to learning design
2. Describe the pipeline for effective design and development of training
3. Define factors that influence training design and promote learning
4. Design a short training course on a specific topic
5. Plan training evaluation using appropriate tools
6. Critically review the design of bioinformatics training

## Programme outline

Pedagogical concepts to learning design

Training design elements

Training evaluation

## Indicative content/proposed activities - sessions/modules/topics

### Week 1 - Dusanka, Sarah, Piv

- Session 1 - LO1 - Theoretical aspects
  - What the course is about and Glossary of terms used
  - Learning outcomes and content of this course
  - Course timetable and logistics
  - Ice breaker/Introductions - [Learners' Memories and Habits DISCUSSION](#) / What makes good and bad training activity (EBI slides)
  - Expectations from the course - what is it that people want to achieve; these can then be revisited at the end (also allows for ensuring discussion of topics of interest can happen, or can point people towards additional resources)
  - Reflection - [What Type of Trainer am I? POLL](#)
  - [How People Learn ARTICLE](#)
  - [EMBL SLIDES 14-18](#)
  - [Pedagogy versus Andragogy DISCUSSION](#)
  - [Teaching Strategies ARTICLE](#)

- [Challenges in Active Learning DISCUSSION](#) and EMBL slide 21
- **Group Dynamics and Facilitation ARTICLE**
- [Reflective practice - Slide 55 EBI](#)
- Something needed in discussion here about setting your training environment so that it promotes learning in a space where learners feel comfortable - not explicitly covered in EBI slides, but a discussion we always have with our learners (and often leads to discussion about how we set our learning out)

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Session 2 - Course design elements and factors LO2 and 3

## Week 2 - Alice, Peter, Ben

- Session 3 - Designing a course Part 1 (Project) LO4  
Use case studies for each step followed by individual application of design element
  - Defining needs and goals - WCS 2.3;2.4
  - Planning and organisation
  - Defining target audience - theory recap slides 22 & 23 EBI;
  - Course content - WCS 2.8-2.15;
  - Learning outcomes -
  - Designing activities and resources
- Session 4 - Designing a course Part 2 (Project) LO4
  - Delivery plan WCS 2.22
  - Assessment plan WCS 2.21
  - Feedback
  - Evaluation plan WCS 2.23

- Verena, Nicky, Isabela

- Session 5 - LO5 - Assessment and evaluation (Project) - BM
  - WCS - [Course Design Elements Part II](#)
  - WCS - [Evaluation Process Applied to Training – Evaluation Planning](#)
  - WCS - [Introduction to Evaluation DISCUSSION](#) -
  - EBI TtT slides 42, 52-55 mainly focussed on evaluation (no assessment).
- Session 6 - LO6 - Review and feedback of course designs (Final project)
  - EBI TtT slides 61-68
  - WCS 3.4 Overview: Design a Short Course or Module and Give and Receive Peer Feedback
  - WCS 3.15 **Your Assignment** (WCS 3.5 -3.9: your course design, learning outcomes, course objectives and learning design, assessment, delivery and evaluation planning)

- WCS 3.16 **Peer Review Assignment** (WCS 3.10-3.13: why use peer review, why use a rubric for peer review, what assessment criteria should be part of the rubric. our suggested rubric)
- WCS 3.17 Useful Tips on Giving Feedback and Receiving Criticism

## RESOURCES

PLOS computational biology Education & Training list

Reflect on course outcomes for personal and course development

### Activity design notes

Possible case studies

- encompassing design pipeline and genomics applications:
- subject topics (pathogen genomics, surveillance, epidemiology, AI, statistical genetics)
- design (mixed audience, LOs, assessment, competency framework, evaluation)
- delivery tools (online resources and developing training material)
- training formats (blended multiple delivery format)

### Assessment plan

- Provide opportunities for learners to check their learning, get feedback
- Mapping of the LOs into Assessment

**Formative** (quizzes, discussions, peer reviewing)

**Summative** (end of course presentation of the project, end of course test)

### [Link to learning designer tool](#)

### Course evaluation

Planning course evaluation around the main question(s), based on the course [Broad objectives](#)

What do we want to evaluate and why?

Who are the main stakeholders?

Equitable evaluation

Methods

Instruments for data collection

Analysis

What do we do with the results

## Part 2: Virtual TtT Course Delivery and Logistics

**Session date:** Wednesday 11th May 2022

**Timezone 1** (UTC+8): 20:00-21:00 / 21:00-22:00 (originally scheduled for 20:00, could be moved, TBC)

**Timezone 2** (UTC-4): 08:00-09:00 / 09:00-10:00 (originally scheduled for 08:00, could be moved, TBC)

**Session chairs:** [Benjamin Moore](#) (EMBL-EBI Ensembl Outreach) and [Piv Gopalasingam](#) (EMBL-EBI training team)

**Session aims:** during this session we will expand on the sections below collaboratively, and ensure alignment between sections, the wider event(s) and any concerns.

**Session outcome:** By the end of this session the sections for course delivery and logistics will be brainstormed collaboratively, discussed and tentatively decided by BES2022 delegates for the course.

**How this session will run:** Session delegates will work in small groups or individually, on one or more sections of course delivery and logistics. Delegates working individually may stay in the Zoom room, or go offline and return at specified times. Delegates working in small groups may do so using Slack channels. Ben and Piv will be chairing and facilitating this session.

[Delivery Planning working spreadsheet](#)

**Other notes from live session:**

**Session attendees:** Katherine Kaldeli, Dusanka Nikolic, Alice Matimba, Verena Ras, Nicola Mulder, Jorge Batista da Rocha, Liliana Casique, Nilson Coimbra

- Thinking about distributed classroom model
  - When we group people in classrooms (virtual or otherwise) how will we do so? Topic, geography, time zones etc. - TBD
  - Verena asks: how do we determine host sites for physical presence
    - Nicky answers: we need to know who the facilitators will be. Host classrooms will be decided by this. May be a local organisation not related directly to teaching
    - Verena notes this will affect timelines. Host applications and selections will take time.
  - We know trainers and hosts will be needed across different regions, with “our” teaching assistants injected in, physically or virtually.
    - Identifying trainers and facilitators will be needed.
- How many facilitators do we have? This will influence maximum class size.

## Sections

Topic	Name	Notes
Dates and/or Timelines, availability ( <a href="#">see Delivery Planning spreadsheet</a> )		See below.
Format and schedule - virtual, blended (synchronous & asynchronous)		<p>Semi-synchronous format with live, virtual sessions hosted twice a week, Approximately at 12pm in the UK/Europe/Africa timezones to capture as many people as possible.</p> <p>Live sessions are Q+A style with the independent work formed of watching pre-recorded videos and going through online materials</p>
Target regions audience/groups, timezones		<p>Single timezone with a single classroom for first iteration.</p> <p>Plan to use English as the primary language for course delivery.</p>
Advertising and virtual hosting (facilitator) applications		List of facilitators is in spreadsheet (targeted/invited)
Application and selection process		<p>Could decide not to open publicly and target different individuals/communities to participate. Would need to have the finalised list of participants by October (4 weeks before course).</p> <p>Would need to assess participants' infrastructure. Do they have good-speed internet to allow stable zoom calls?</p>
Grouping participants by topic/geography		If any grouping is required this should be done according to topic/area of expertise/language.
Classroom and host management		Teaching assistants? Reduce the load on the facilitators. Each facilitator could propose a set of TAs.
Platforms	Piv	Zoom, GoogleDocs?, Slack or another instant messaging service (WhatsApp is commonly used in many countries inc. LatAm), web forum if available,

Facilitator application survey forms ( <a href="#">see Delivery Planning spreadsheet</a> )		
Participant survey forms ( <a href="#">see Delivery Planning spreadsheet</a> )		Cross check with NGS template to be shared by Verena

### Dates and/or Timelines, availability ([see Delivery Planning spreadsheet](#))

What else needs to be in the list below? Please be as comprehensive as possible.

November 2022 is a proposed month for the course to run.

Is it worth timing the course with the “academic calendar” e.g. before a term/semester begins so new trainers/instructors could utilise training immediately for their teaching/training?

Activity	Outcome/output	Dates	Respons.	Time before course
Finalise course description	Programme outline	4-6 weeks		7 months
Develop criteria for training facilitators Call for training facilitators to sign up or by invitation?- TtT trainer register (GOBLET, Life Science Trainers, Galaxy training network, H3Abionet, CABANA, APBionet, ELIXIR, WCS)	Criteria, communication or survey to register as a TtT trainer	1 month		6 months
Finalise curriculum overview	Course plan - Develop module outlines, objectives, activities	1 month		5 months
Call for participant applications, review and selection	Survey	3-4 weeks. Could decide not to open publicly and target different individuals/communities to participate. Would need to have the finalised list of participants by		4 months

		October (4 weeks before course).		
Develop training materials	Lecture videos, resources and contact session guides	4-6 months		3 months
Reviewing and testing	By training facilitators	1 month		1 month
Course delivered	Module leads selected			0 month

**Format and schedule - virtual, blended (synchronous & asynchronous)**

**Target regions audience/groups, timezones**

**Advertising and virtual hosting applications**

**Application and selection process**

**Grouping participants by topic/geography**

**Classroom and host management**

**Platforms**

**Facilitator application survey forms [\(see Delivery Planning spreadsheet\)](#)**

**Participant survey forms [\(see Delivery Planning spreadsheet\)](#)**

## Part 3: Training Outline/Course Summary

### Bioschema aligned template:

**Workshop Title/name:**

**Course Overview/description:**

**Keywords:** *Please provide at least 2 – 5 keywords for your training. These should ideally be EDAM terms but general keywords are fine.*

**Skill level of training:** *Please specify whether the training is aimed at a “beginner”, “intermediate” or “advanced” level*

**Language:** *in what language/s is the course and materials offered*

**Credential awarded:** *“None”, “letter of completion”, “accredited certificate”, “workshop certificate”, etc.*

**Has this course been run before?** *Provide links to previous course pages/content if available*

**Type of training:** *“online”, “face-to-face”, “blended”, “other”*

**Venue of workshop:**

**Dates for the workshop (duration if run as a MOOC):**

**Workshop organisers:**

**Registration opens:**

**Registration closes:**

**Notification date:**

**Link to application form:**

**Workshop Sponsors:** *H3ABioNet and xx*

**Intended Audience:**

**Syllabus and Tools:**

**Licensing for course materials:** *The default licensing attached to any workshop and materials will be a creative commons license. Please do specify if a different license is required or whether materials will not be available publicly. If materials cannot be linked to our website, please specify a contact person in order to gain access to materials in future.*

**Prerequisites:**

**Learning objectives/outcomes:** After this workshop participants should be able to:

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**Workshop limitations:** This workshop will only provide a foundation for continued learning in

\*\* Please note that by completing this template you agree to deposit any training materials used throughout the course in a location specified by the Training Material curation team.

**This template was completed by:** <Name of person who completed/submitted the form>

**This template was checked by:**

