



# The ETHIQ Diploma Launch Meeting

Thursday 27<sup>th</sup> April, 13:30-14:30, Room I



## **The first intake is planned for July 2023**

- The European Technical H&I Qualification (ETHIQ Diploma) is an online, Moodle based training course for technologists working in EFl accredited labs.
- Come and join us at the launch meeting to find out more about the training course



# What is the ETHIQ Diploma?

## ETHIQ - Introduction & process

[Dashboard](#) / [My courses](#) / [ETHIQ - Introduction & process](#)

Background

Training info >

Online Training

Individual learning and development events

Case Study / Validation Report

Final Assessment

Evidence of training

### Training info

The ETHIQ Training comprises four elements;

1. Online ETHIQ Training
2. A summary of individual learning and development events
3. A basic case or validation report
4. Final Assessment

- The European Technical H&I Qualification (ETHIQ Diploma) is an online, Moodle based training course for technologists working in EFi accredited labs.



## Lab Directors Questionnaire

The Education Committee circulated a questionnaire to EFI Laboratories to gather feedback regarding a number of aspects of the ETHIQ Diploma training.

The main points from the questionnaire are summarised below:

- Feedback from questionnaire was positive
- Most laboratories would plan to register eligible candidates gradually
- A webinar for trainees and training supervisors would be welcomed
- Translation of the logbook would be welcome in some countries – cannot determine which from questionnaire?
- The cost of 200-250 euros would be prohibitive for some laboratories
- The need for candidates to be EFI members would be challenging for some laboratories



## Registration Process

- There will be two dates for registration each year, initially with a maximum of 20 registrants at each intake.
- Registration will be on the basis of the first 20 complete applications received
- The first planned intake in 2023 will be: Registration deadline 1<sup>st</sup> July
- Subsequent registration deadlines each year will be:
  - 1<sup>st</sup> January
  - 1<sup>st</sup> July



## ETHIQ Training Programme Costs

- Following feedback from EFI labs, the following proposal regarding cost and the requirement to be an EFI member has been approved by the EC
- Keep the cost at 200 euros for registration but to include EFI membership for the period while the candidate is undertaking the ETHIQ Diploma training.



# ETHIQ Diploma Background

## Background >

## Training info

## Notes for Supervisors

### Background

The ETHIQ Diploma is managed and administered by the EFI Education Committee. The purpose of the training is to enable technical staff working in H&I to demonstrate knowledge and competence within their workplace. All registrants for the ETHIQ certificate must be EFI members.

Training is aimed at all Technical Staff working in EFI accredited laboratories supporting clinical solid organ and/or haematopoietic stem cell transplantation. The definition of Technical Staff may vary between countries, but it is hoped that the ETHIQ will be an appropriate training scheme for staff that are involved in bench work in H&I labs, but who may not have the responsibility for final reporting of results. Senior staff (e.g. those who are Directors or co-Directors or those who wish to reach this level) are encouraged to develop their learning in order to take the EFI/UEMS ESHI Diploma.

The training is undertaken within the trainee's laboratory and will be delivered under the supervision of a local training supervisor over the course of 12-36 months. The training supervisor must be an individual who is a Director or Co-Director of an EFI accredited lab, or is a holder of the ESHI Diploma (honorary or by examination). It is also important that the Head of Laboratory (if different to the Training Supervisor) signs the application form (Appendix A) to show they are supportive of the trainee's application.

- Aimed at technologists involved in bench work in H&I labs but may not have the responsibility for final reporting of results
- Training is undertaken within the trainees own lab
- Under supervision of a local training supervisor
- Expected to take 12 – 36 months



# For Supervisors

## ETHIQ - Introduction & process

[Dashboard](#) / [My courses](#) / [ETHIQ - Introduction & process](#)

Background

Training info

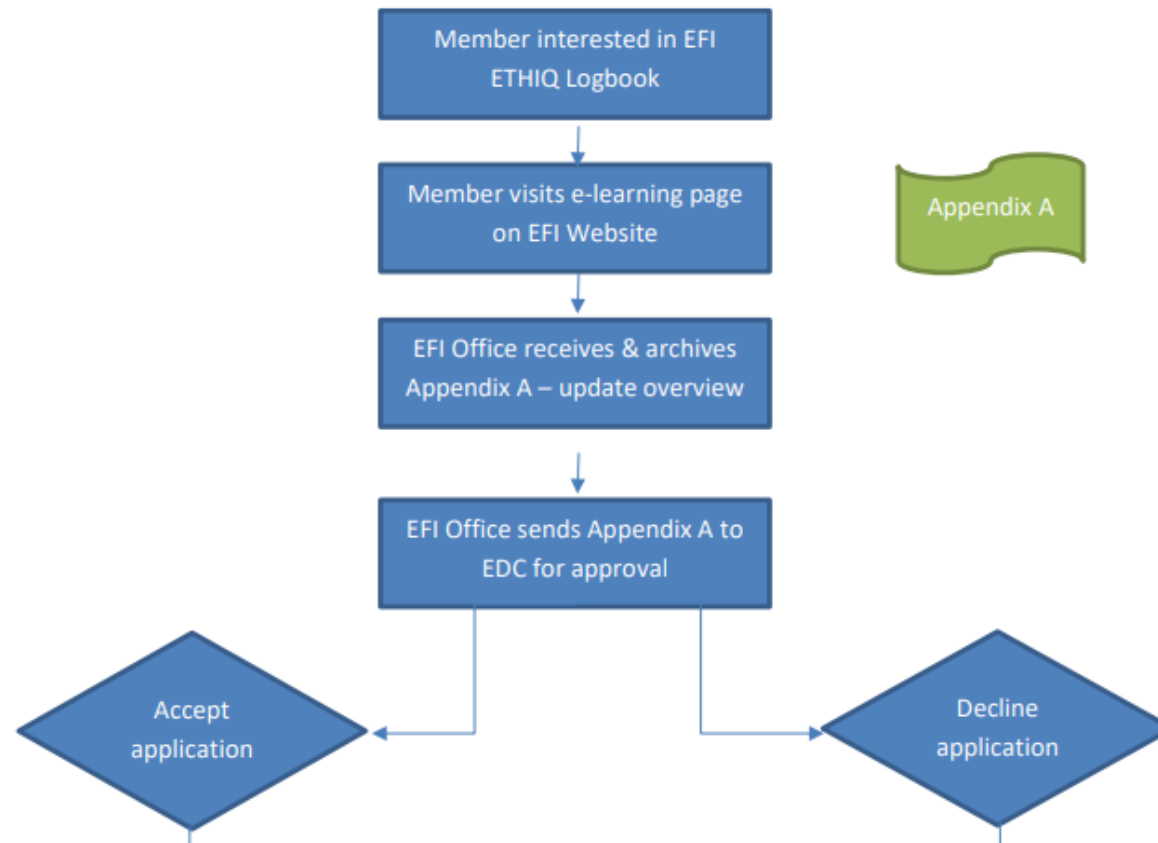
**Notes for Supervisors** >

### Notes for Supervisors

1. The training supervisor must be an individual who is a Director or Co-Director of an ESI accredited lab, or is a holder of the ESHI Diploma (honorary or by examination)
2. The Director of the H&I laboratory must also sign the application form (if different to the trainee supervisor) to show they are supportive of the trainee undertaking the ETHIQ
3. The Training Supervisor must sign off all training manual evidence provided or delegate to an appropriate individual in the laboratory
4. The Training Supervisor must sign off the reflective learning activities
5. The Training Supervisor must sign off the case study/validation report as being satisfactory (use the Assessment of Case Study / Validation report form in Appendix H)



# The Process – 1: Application







# Application Form



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

## ETHIQ LOGBOOK APPENDIX A

Page 1 of 4

### EFI ETHIQ LOGBOOK APPLICATION FOR REGISTRATION

TRAINEE INFORMATION			
Surname	Click or tap here to enter text.	Forename	Click or tap here to enter text.
Job title	Click or tap here to enter text.		
EFI Member	<input type="checkbox"/> Yes, membership number: Click or tap here to enter text. <input type="checkbox"/> No, I will become an EFI member via the website: <a href="http://www.efi-web.org">www.efi-web.org</a>		
Start date in current lab	Click or tap here to enter text.		
Laboratory / institution details			
Name of lab / institution: Click or tap here to enter text.			
Postal/Zip code: Click or tap here to enter text.			
City: Click or tap here to enter text.			
Country: Click or tap here to enter text.			
Telephone	Click or tap here to enter text.		
Email	Click or tap here to enter text.		
Signature of Trainee		Date	Click or tap here to enter text.

PROPOSED H&I TRAINING SUPERVISOR			
Note: The training supervisor must be a Director or Co-Director of an EFI accredited lab, and/or a holder of the ESHI Diploma (honorary or by examination)			
Name	Click or tap here to enter text.		
Current grade	Click or tap here to enter text.		
Signature of Trainee Supervisor		Date	Click or tap here to enter text.

Indication of the planning to complete the ETHIQ Logbook in 1, 2 or 3 years		Completion in Click or tap here to enter text. <b>Years</b>
Training start date	Click or tap here to enter text.	Proposed completion date Click or tap here to enter text.



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

## ETHIQ LOGBOOK APPENDIX A

Page 2 of 4

NAME OF HEAD OF DEPARTMENT			
The above Trainee's application for registration on the ETHIQ Training Scheme has the full support of the Head of Department and the training laboratory holds current EFI accreditation.			
Name	Click or tap here to enter text.		
Current grade	Click or tap here to enter text.		
Signature of Head of Department		Date	Click or tap here to enter text.

Section A - Specialist H&I knowledge (A1-A2-A3 Mandatory; A4 Optional)		
A1 - Basic Immunology		
	A1.a Innate immune responses	
	A1.b Adaptive immune responses	
A2 - The HLA System		
	A2.a HLA genes	
	A2.b HLA molecules	
	A2.c HLA nomenclature and polymorphism	
	A2.d Clinical relevance of the HLA system	
A3 - Transplant Immunology		
	A3.a Allorecognition	
	A3.b Rejection responses	
	A3.c Graft versus Host Disease (GvHD)	
A4 - H&I laboratory role in transfusion	Optional	<input type="checkbox"/>



# Application Form continued



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

## ETHIQ LOGBOOK APPENDIX A

Page 3 of 4

Section B - General competences (Mandatory)	
B1 - General laboratory practice	
	B1.a General laboratory practice
B2 - Safe working practices in the clinical HLA laboratory	
	B2.a Health and Safety
	B2.b Dealing with potential hazards in the laboratory
	B2.c Incident / Accident reporting
	B2.d Laboratory Equipment
B3 - Quality management	
	B3.a Quality Management System
	B3.b Quality Control
	B3.c Quality Assurance
B4 - Data handling	
	B4.a Data handling
B5 - Stock maintenance	
	B5.a Maintaining working stocks
	B5.b Receipt of stock deliveries
B6 - Specimen reception and handling	
	B6.a Specimen reception
	B6.b Logging specimens into Laboratory Information Management System (LIMS)
	B6.c Specimen storage



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

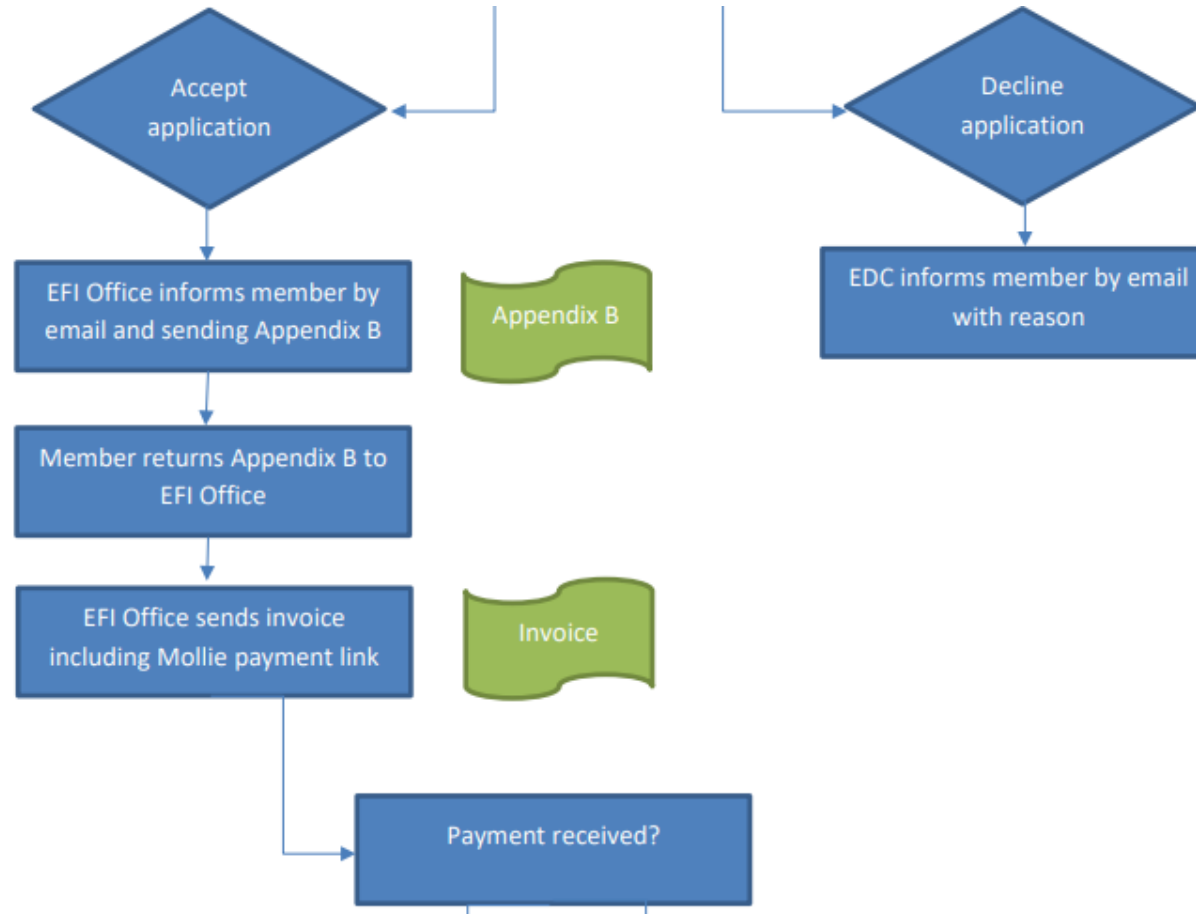
## ETHIQ LOGBOOK APPENDIX A

Page 4 of 4

Section C - Specialist H&I competences (Optional)	
C1 - Sample processing	
	C1.a - Separation of serum/plasma samples
	C1.b - Separation of lymphocytes from peripheral blood or tissues
	C1.c - Freezing and thawing lymphocytes
	C1.d - Extraction of DNA
C2 - Serological competences	
	C2.a - Lymphocytotoxicity assays
	C2.b - Flow cytometry crossmatching
	C2.c - Antibody identification and definition by solid phase assays
C3 - Molecular competences	
	C3.a - DNA contamination tests
	C3.b - Definition and analysis of HLA gene polymorphism by gel based PCR-SSP
	C3.c - Definition and analysis of HLA gene polymorphism by real time PCR
	C3.d - Definition and analysis of HLA gene polymorphism by PCR-SSO
	C3.e - Definition and analysis of HLA gene polymorphism by SBT: Sanger or NGS
	C3.f - Post-HSCT engraftment monitoring by STR (Short Tandem Repeats)
	C3.g - Post-HSCT engraftment monitoring by qPCR



## The Process – 2: Payment





# Invoice and Payment



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

## INVOICE ETHIQ TRAINING

Address:  
EFI Office – Administration  
Attn. Ingrid Abelman  
Poortgebouw (Noord)  
Kamer: N-00-002  
Rijnsburgerweg 10  
2333 ZA Leiden  
The Netherlands  
Email: education@efiweb.org



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

## ETHIQ LOGBOOK APPENDIX B

Page 1 of 1

To:

Send by email to:

INVOICE NUMBER	INVOICE DATE	DUE DATE

Membership number	Name	Training period	Description	Line total
			ETHIQ Training fee	
			TOTAL	€
PAYMENT MUST BE MADE FOR THE FULL AMOUNT, FREE OF BANK CHARGE \$, IN EURO \$, WITHIN FOUR WEEKS AFTER RECEIVING THE INVOICE				

### Payment:

Please use the link [in order to](#) pay the above amount in full via Mollie. Please note Mollie (Stichting Mollie Payments) is the payment partner of European Federation for Immunogenetics.

Use this data only for the completion of this particular payment. Please make sure that you fill in all the details correctly.

## BANK INFORMATION FORM

for payment of

EFI Technical H&I Qualification (ETHIQ) training

The total cost of registration is paid annually over the period of training. The minimum term of registration is 12 months and the maximum 36 months.

The registration fee covers the cost of the Training Manual and all the administrative costs of the Trainee's assessments.

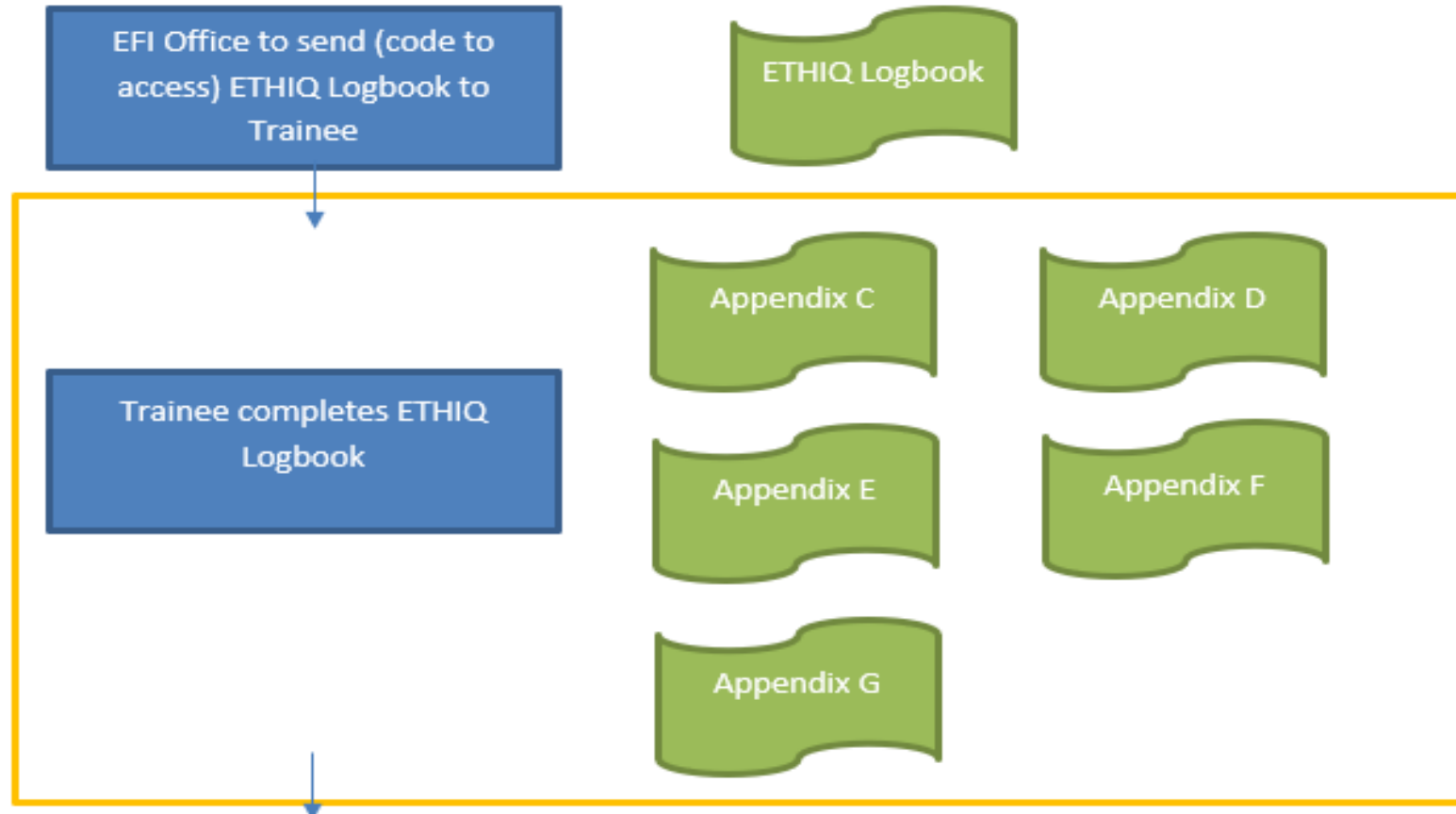
PLEASE PROVIDE FULL DETAILS OF THE INDIVIDUAL TO WHOM THE INVOICES FOR REGISTRATION CHARGES SHOULD BE SENT

INFORMATION INVOICEE'S			
Invoicee's surname		Invoicee's initials	
Name institution			
Invoicee's full postal address			
Telephone		Email	

INFORMATION INVOICE ETHIQ TRAINING			
Purchase order		Date	
Trainee name		Trainee EFI Membership No	

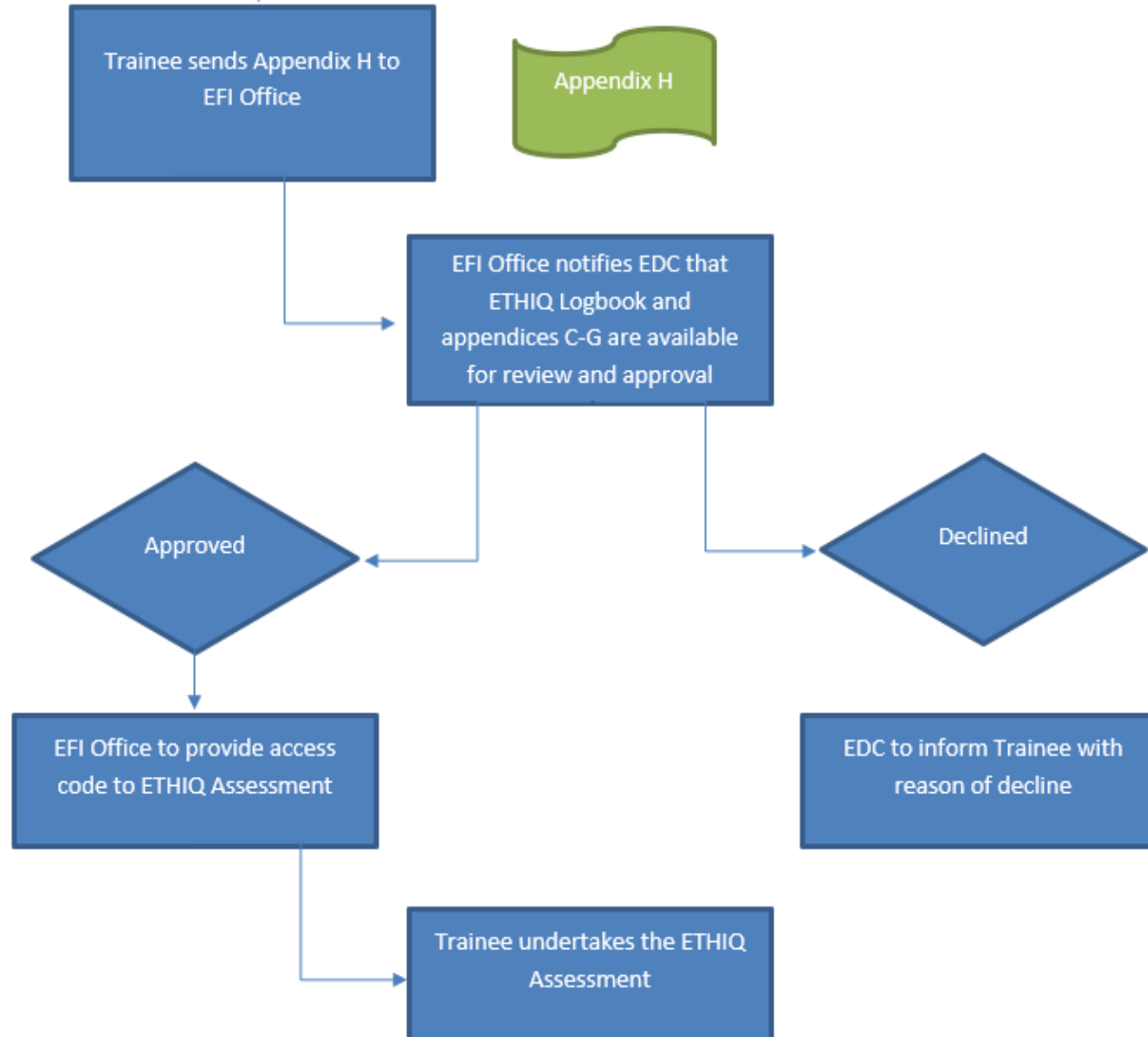


## The Process – 3: Registration



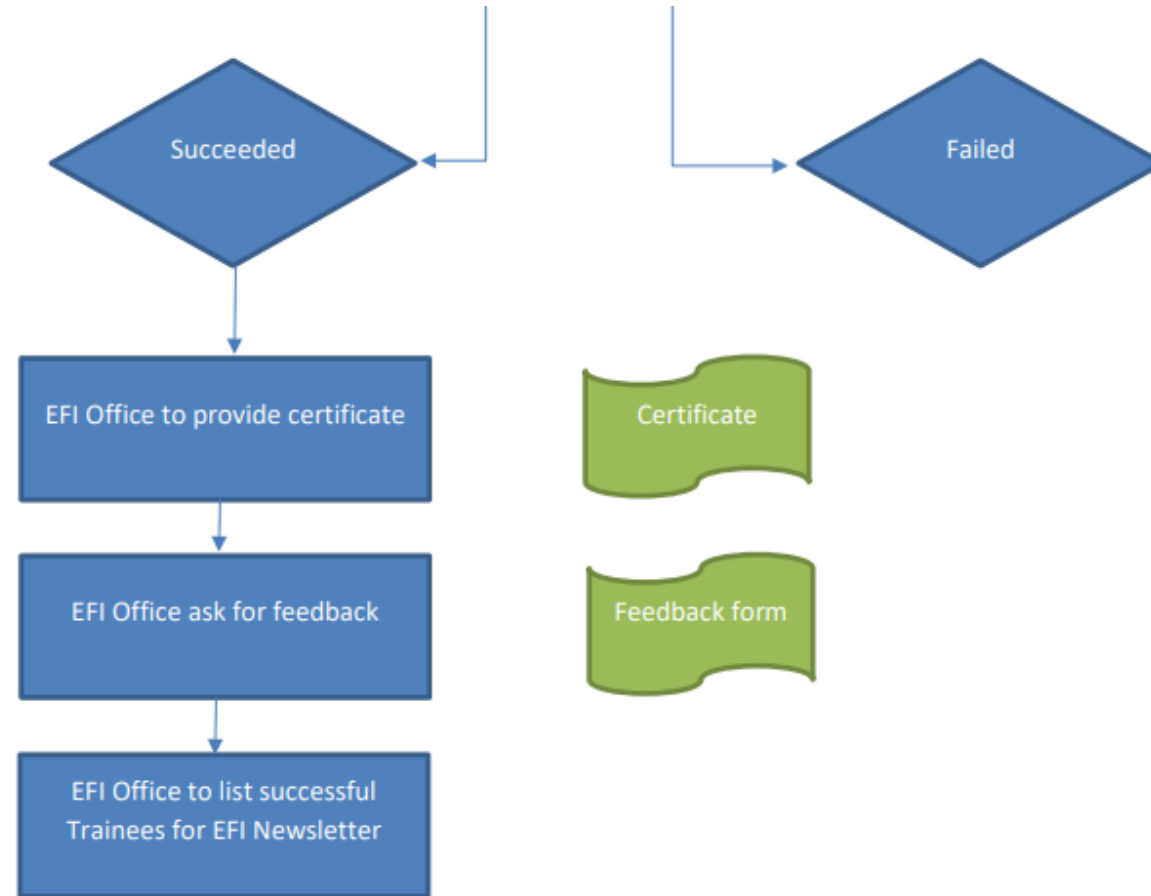


## The process – 4: Application for final assessment





# The Process – 5: Completion





## Getting started



**Username:**

deborahsage

**Password:**

.....

☐ **Remember username**

**Log in**

[Forgotten your username or password?](#)


Cookies must be enabled in your browser [?](#)

<https://myportal.efi-web.org/login/index.php>





# EFI Education Dashboard




EFI Education: Dashboard

Course overview

▼ All (except removed from view) ▼

Course name ▼

Card ▼




**ETHIQ ASSESSMENT**

ETHIQ ...

ETHIQ Assessment (pilot)

0% complete




**ETHIQ INTRODUCTION**

ETHIQ ...

ETHIQ - Introduction & process

Hidden from students




**ETHIQ - SECTION A SPECIALIST H&I KNOWLEDGE**

ETHIQ ...


ETHIQ Training - Section A - Specialist H&I ...

Hidden from students

0% complete



**ETHIQ - SECTION B GENERAL COMPETENCES**



**ETHIQ - SECTION C SPECIALIST H&I TECHNIQUES**



# Online training logbook

Background

Training info

Online Training >

Individual learning and development events

Case Study / Validation Report

Final Assessment

Evidence of training

Notes for Supervisors

## Online Training

The Training Manual describes the competences required of technical staff working in the H&I laboratory and is split into 3 sections:

### 1. **Section A - Specialist H&I Knowledge**

Section A contains the Specialist H&I knowledge the candidate is expected to understand. For Section A parts 1-3 are mandatory and part 4 may be completed if relevant to the candidates experience.

### 2. **Section B - General competences**

Section B of the manual contains the competences which are required of candidates in whichever part of the laboratory they are working. All areas of this section must be completed.

### 3. **Section C - Specialist H&I Techniques**

Section C contains specialist H&I competences which may or may not be pertinent to the role of the candidate. The candidate does not have to complete all of Section C if gaining sufficient experience is not possible in their laboratory. However, as a minimum, at least 50% of one of the sections must be completed.



# How to complete and document training



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX C

Background

Training info

Online Training

Individual learning and  
development events

Case Study / Validation  
Report

Final Assessment

Evidence of training >

Notes for  
Supervisors

## Evidence of training

In order to complete the Training Manual, evidence must be provided. Signing off competences and knowledge can be delegated by the training supervisor to other senior staff in the laboratory. Note: all forms can be completed in English or in the local language of the candidate's laboratory. Appropriate assessment methods are:

### 1. **Written (W)**

The candidate has written a summary to show their understanding of the section. Use the Written Evidence form in Appendix C.

### 2. **Observed (Obs)**

The candidate has been observed competently performing the process on at least two occasions. Use the Observed Competency Evidence form in Appendix D.

### 3. **Oral (O)**

The supervisor (or delegated individual) and the candidate have discussed the section. Make a record of the discussion using the Oral Discussion Evidence form in Appendix E.

## WRITTEN EVIDENCE FORM

Section A - Specialist H&I Knowledge

A1.b Adaptive immune responses

Summary of topic in candidates own words (note: in English or language local to the laboratory):

Sources of information

Assessment method

W

Date

Trainee Supervisor signature

Trainee signature



# ETHIQ Training Section A – Specialist H&I Knowledge

General >
A1 - Basic Immunology
A2 - The HLA System
A3 - Transplant Immunology
A4 - H&I laboratory role in transfusion



This section of the manual contains the specialist H&I knowledge which is required of all candidates .



# ETHIQ Training Section A – Specialist H&I Knowledge

General

A1 - Basic Immunology

A1.a - Innate immune responses

A1.b - Adaptive immune responses >

A2 - The HLA System

A3 - Transplant Immunology

A4 - H&I laboratory role in transfusion

## A1.b - Adaptive immune responses

Understands:

- the cells involved in the adaptive immune response
- the role of antigen presenting cells
- T cell subsets and their roles
- MHC restriction for T cell activation
- T cell activation via class I and class II antigen presentation
- B cell activation and antibody production
- antibody classes and subclasses



[A1.b - ETHIQ Written evidence form \(Appendix C\)](#)



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX C

### WRITTEN EVIDENCE FORM

Section A - Specialist H&I Knowledge	A1.b Adaptive immune responses		
Summary of topic in candidates own words (note: in English or language local to the laboratory):			
Sources of information			
Assessment method	W	Date	
Trainee Supervisor signature		Trainee signature	





# ETHIQ Training Section B – General Competences

General >
B1 - General laboratory practice
B2 - Safe working practices in the clinical HLA laboratory
B3 - Quality management
B4 - Data handling
B5 - Stock maintenance
B6 - Specimen reception and handling



This section of the manual contains the competences which are required of all candidates



# ETHIQ Training Section B – General Competences



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX E

General

B1 - General  
laboratory practice

**B2 - Safe working  
practices in the  
clinical HLA  
laboratory**

B2.a Health and Safety

B2.b Dealing with  
potential hazards in  
the laboratory >

B2.c Incident /  
Accident reporting v

B3 - Quality  
management

B4 - Data handling

B5 - Stock  
maintenance

B6 - Specimen  
reception and

## B2.b Dealing with potential hazards in the laboratory

Aware of:

- potential chemical and biological laboratory hazards
- methods for dealing with spillages
- why and when working surfaces and floors need to be decontaminated or disinfected
- reporting procedures for potential / hazardous faults
- the need for safe storage of hazardous materials
- the dangers of liquid nitrogen
- the local waste disposal policy



[B2.b - ETHIQ - Oral discussion evidence form \(Appendix E\)](#)

### ORAL DISCUSSION EVIDENCE FORM

Section B - General competences	B2.b Dealing with potential hazards in the laboratory		
Summary of discussion (to be completed by trainee supervisor or nominated deputy):			
Sources of information			
Assessment method	O	Date	
Trainee Supervisor signature		Trainee signature	



# ETHIQ Training Section C – Specialist H&I Techniques

General >
C1 - Sample processing
C2 - Serological competences
C3 - Molecular competences



## Specialist techniques

This section contains specialist competences which may be pertinent to the role of the candidate. All competences relevant to the candidate's laboratory should be completed. Where a candidate contributes to a technique but does not perform all of it they can be assessed for their contribution, provided this is made clear in the evidence form submitted. The candidate does not have to complete all of Section C, if gaining sufficient experience is not possible in their laboratory. However, as a minimum, at least 50% of one of the sections must be completed.





# ETHIQ Training Section C – Specialist H&I Techniques



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX D

General

C1 - Sample  
processing

**C2 - Serological  
competences**

C2.a -  
Lymphocytotoxicity  
assays

C2.b - Flow cytometry  
crossmatching

C2.c - Antibody  
identification and  
definition by solid  
phase assays >

C3 - Molecular  
competences

## C2.c - Antibody identification and definition by solid phase assays

Understands:

- the basic principles of antibody detection/definition
- problems that may be encountered in solid phase assays for antibody detection
- the need for quality control samples in solid phase assays for antibody detection

Competently:

- follows the local procedures for antibody detection/definition using solid phase assays
- analyses / interprets the results of the assay seeking advice as necessary



[C2.c - ETHIQ Written evidence form \(Appendix C\)](#)



[C2.c - ETHIQ Observed Competency evidence form \(Appendix D\)](#)

### OBSERVED COMPETENCY EVIDENCE FORM

Section C - Specialist H&I Techniques		C2.c Antibody identification and definition by solid phase assays	
Summary of occasions that competence was assessed by supervisor or nominated deputy (include whether SOP was followed, whether appropriate results were obtained and the date of assessment):			
Assessment 1:			
Assessment 2:			
Trainee signed off as competent for this area in line with EFI Standards?			
<input type="checkbox"/> Yes		<input type="checkbox"/> No	
Assessment method	Obs	Date	
Trainee Supervisor signature		Trainee signature	



# Individual learning and development events



ETHIQ LOGBOOK  
APPENDIX F

Background

Training info

Online Training

Individual learning and  
development events >

Case Study / Validation  
Report

Final Assessment

Evidence of training

Notes for  
Supervisors

## Individual learning and development events

Candidates must submit a summary of individual learning and development events. It would be expected that candidates attend a minimum of 3 learning events (seminars, presentations, conferences, local meetings) per year of their training period.

Please use the REFLECTIVE LEARNING ACTIVITY RECORD FORM (Appendix F) for each event.



F. Reflective Learning Activity Record Form

### REFLECTIVE LEARNING ACTIVITY RECORD FORM

Name of learning event:

Date of learning event:

Summary of learning event (to be completed by trainee):

Assessment method

Date

Trainee Supervisor signature

Trainee signature



# Completion of a Case Study or Validation report



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX G

Background

Training info

Online Training

Individual learning and  
development events

Case Study / Validation  
Report >

Final Assessment

Evidence of training


Notes for  
Supervisors

## Case Study / Validation Report

Candidates must prepare and submit one of the following:

1. A basic case study from within the candidates experience or
2. A validation report (e.g. new assay /reagent validation)

This must be completed using the candidate's own format (minimum 500-maximum 1,000 words). This can be completed in English or in the local language of the candidate's laboratory.

 G. Assessment of Case Study / Validation report by Training Supervisor Form

### ASSESSMENT OF CASE STUDY / VALIDATION REPORT

Candidates must prepare and submit one of the following:

1. A basic case study from within the candidates experience or
2. A validation report (e.g. new assay /reagent validation)

This must be completed using the candidate's own format (minimum 500-maximum 1,000 words). This can be completed in English or in the local language of the candidate's laboratory.

Assessment method		Date	
Trainee Supervisor signature		Trainee signature	



# The Final Assessment



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

ETHIQ LOGBOOK  
APPENDIX H

## TRAINING MANUAL APPLICATION FOR FINAL ASSESSMENT FORM

At the end of the training period the Training Manual and associated evidence is sent to the EFI Education Committee and is assessed to ensure there is evidence of appropriate understanding and training in H&I.

Background

Training info

Online Training

Individual learning and  
development events

Case Study / Validation  
Report

Final Assessment >

Evidence of training

Notes for  
Supervisors

## Final Assessment

At the end of the training period the Training Manual and associated evidence is sent to the EFI Education Committee and is assessed to ensure there is evidence of appropriate understanding and training in H&I (use the Training Manual Application for Final assessment form in Appendix H).

If sufficient evidence is provided the candidate is then invited to undertake a short online assessment which must be passed for the candidate to be awarded the ETHIQ Diploma. It will be possible to omit some questions if training has not been received in these areas. If there are deficiencies in the training then the candidate will be asked to remedy these deficiencies before re-submission for assessment.



H. Training Manual Application For Final Assessment Form

Assessment method		Date	
Trainee Supervisor signature		Trainee signature	



# Final Assessment

General

**ETHIQ Logbook  
Assessment (pilot)** >

## ETHIQ Logbook Assessment (pilot)

The ETHIQ Diploma is managed and administered by the EFI Education Committee. The purpose of the training is to enable technical staff working in H&I to demonstrate knowledge and competence within their workplace.

Following the successful assessment by the EFI Education Committee of your Training Manual and associated evidence, you have been invited to undertake a short online assessment which must be passed to enable the award of the ETHIQ Diploma.

You will be given 60 minutes to complete 30 multiple choice questions relating to topics contained in the ETHIQ syllabus. Candidates need to answer 75% of questions correctly to pass this assessment. If the outcome of the assessment indicates deficiencies in training that need to be rectified, then the candidate will be asked to remedy these deficiencies before resubmission.



ETHIQ Logbook Assessment (pilot)



# Congratulations!!!!!!



European  
Federation for  
Immunogenetics

## ETHIQ DIPLOMA

is awarded to

**Name of candidate**

for successfully passing the Training Manual and Online Assessment of the  
EFI Technical H&I Qualification (ETHIQ)  
for Technical Staff Working in EFI Accredited Laboratories

Date

---

Ann-Margaret Little  
President

---

Dave Roelen  
Secretary

---

Deborah Sage  
Chair Education Committee



# Feedback pilot applicants ETHIQ Diploma



## Experience

- 4 applicants in our region : 2 in Lyon, 1 in Grenoble and 1 in St Etienne
- Technical supervisors
- 15 months time period between registration and final assessment





## Organisation

- One candidate  $\Leftrightarrow$  One supervisor
- Takes time for both parties to provide proofs and evaluate the knowledge
- Planning of regular short interviews between candidate and supervisor to validate the progress, take care of difficulties and maintain confidence
- Fundamentals would need to be updated: provide adequate training courses to the candidate



## Motivation

- Both the candidate and the supervisor should be motivated to enter the program and finalise it in the dedicated time
- Time consuming: need to work at home for e-learning courses
- Supervisor must provide adequate supervision, recommendations, and advice



## Positive Consequences for applicants

- Improvement and update of immunological and technical knowledge
- Valorization of personal work
- Recognition of lab position or a step-up to a more valuable position, and even higher wages .... 😊



Questions??