

# **D3.2 GESEA4EU Training Courses' provision** report

**Gynaecological Endoscopic Surgical Education and Assessment for Europe** 

**Project Number: 1011011** 

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#### Introduction

The GESEA4EU project aims to develop standardised learning modules that are applicable and recognised across Europe as part of the GESEA Educational Programme. These modules are designed to enhance the competencies of healthcare professionals involved in gynaecological endoscopic surgery, ensuring a consistent and high-quality standard of training throughout Europe.

This document provides an overview of the training activities conducted under Work Package 3 between months 10 and 24 of the project. In terms of tasks, this work relates to the following tasks as described in the project proposal and contract:

- **Task 3.2**: Deliver foundational knowledge and skills to general practitioners, aligning with the GESEA Educational Programme's core principles.
- **Task 3.3**: Focus on specialist professionals, particularly gynaecological surgeons, following the standardised learning and certification pathway established by GESEA.
- **Task 3.4:** Provide nurses with essential competencies to assist in endoscopic surgery and operate advanced surgical technology.
- Task 3.5: Address non-clinical personnel, equipping them with technical knowledge of instrumentation and its surgical applications, enabling better support for the surgical team.
- **Task 3.6:** Concentrate on expanding the GESEA network by training new trainers in regions where the programme is not yet active, ensuring the localised delivery of GESEA modules.

Each of these tasks directly supports the overarching objective of Deliverable 3.2, which is to provide a comprehensive report on the training activities which were tailored to a diverse group of professionals, including general practitioners, gynaecological surgeons, nurses, non-clinical staff, and new trainers in existing GESEA Diploma and Training Centres as well as in regions where the GESEA programme has yet to be implemented referred to as 'Target Centres'.

# **Overview**

The training activities in this document are described as they were delivered in practice, reflecting realised implementation across various contexts. Where there were changes in either the delivery approach, e.g. where a hybrid course was delivered fully on-site, this is indicated and the rationale for the difference explained. Several training modules are referred to as Joint Modules, i.e. they are online modules that participants in other

modules were expected to take and where this is the case, they are included according to the type of participant to which the module was aimed. Rather than describing the materials created and made available separately for each course, we have included a chapter in this report which provides an overview of the e-learning platform used in GESEA4EU and the large library of videos specifically recorded or adapted for the project.

While the assessment and/or certification approach for each module is indicated in this report, assessment or evaluation is not elaborated, as this topic forms the basis for Deliverable 4.1, finalised at the same time as this deliverable.

We have organised the reports on delivery of the different modules according to the users to which they were targeted and referenced both the original target numbers for participants in comparison with the numbers reached as well as any significant adjustments made to either the mode of delivery, timing or outcomes. The following table provides an overview of the number of participants targeted for each module, along with the numbers of actual participants.

Module	Target numbers of participants	Actual participants
L1 Basic Laparoscopy	180	197
L2 Intermediate Laparoscopy	90	90
L4 Advanced Laparoscopy	50	50
H1 Basic Hysteroscopy	180	197
H2 Intermediate Hysteroscopy	90	90
L3+H3 MIGS Clinical Attachment	8	1
H4 Digital Hysteroscopy Centre	10	10
R1 Robotics	45	29
L5 Laparoscopy for Nurses	24	51
H5 Hysteroscopy for Nurses	24	51
H6 Digital Hysteroscopy Centre for Nurses	10	12
R2 Robotics for Nurses	10	10
G4 GESEA Administration	12	15
L6 Laparoscopy for non-clinical staff	15	15
H7 Hysteroscopy for non-clinical staff	15	15
G5 Motivation and Communications	54	54

L7 Laparoscopy for training specialists	54	54
L8 Laparoscopy for training Nurses	12	19
H8 Hysteroscopy for training specialists	54	54
H9 Hysteroscopy for training Nurses	12	19
R3 Robotics for Training Specialists	10	10
R4 Robotics for Training Nurses	5	7
G1 Remote consultations	270	196
G2 Endoscopic Surgery and Patient Well being	50	460
G3 GESEA Educational Programme	300	466

As this table shows, there were only 3 instances in which the team failed to reach the target numbers. For L3+H3 MIGS Clinical Attachment this has been due to a number of factors largely down to the fact that this 12-24 month clinical attachment requires considerable inter-institutional and cross-border agreements regarding conditions for the applicants which have taken considerable time to negotiate. However, the first of these placements has now begun and the team expects that further placements will be possible shortly. The situation regarding R1 has already been explained and relates directly to there not being enough suitable equipment available for the necessary hands-on training. Finally, while the target for G1 has not been reached, the interest in this general module which is delivered online is growing and so the team expects to have reached this target by end of 2025.

For a breakdown as to the countries of origin of each participant, please see the updated version of D1.4 which also indicates the extent to which participants have received a certificate or micro-credential.

# **Modules aimed at Specialist Professionals**

# **Basic Laparoscopy/Hysteroscopy Modules**

Module	L1/H1/G1/G3	
Title	Basic Laparoscopy/Hysteroscopy plus Remote Consultations, Endoscopic Surgery and Patent Wellbeing, GESEA Educational Programme	
Original target	180 for L1/H1, 10 from each Diploma Centre and Target Centre 270 in total for all iterations of G1 300 in total for all iterations of G3	
Actual number of participants	197 participants enrolled 196 in total for G1 also given to L2/H2 466 in total for G3, also give to some participants in L2/H2, L7/H8, L6/H7	

The Basic Laparoscopy and Hysteroscopy modules were run as planned as hybrid modules. Participants first enrolled on the online platform to complete the digital components of the modules before engaging in hands-on training at designated centres.

Planning for the delivery of these modules commenced in the summer of 2023, with the first sessions conducted in January 2024. The implementation included iterations of the modules at established GESEA Diploma and Training Centres and new Target Centres, which were mentored by an existing Diploma Centre to ensure quality and consistency.

While L1 and H1 were designed as hybrid modules, the G1 and G3 modules were conceived as shorter, fully online courses. These modules were all advertised on the GESEA4EU website as well as through the promotional channels of the Centre delivering the training.

Assessment for these modules follows the GESEA Certification Level 1, aligning with the established GESEA pathway. The certification results are included in the Work Package 4 (WP4) reporting practices, reflecting the progress and outcomes of this initiative. It was not initially foreseen that the training centres would conduct the assessment for these modules, but this step has now become essential for the completion of the certification process.

Location of Centre	Date of delivery	Participants	Led by
Dublin, Ireland (New Target Centre)	4-5 January 2024	10	EAGS/ULG
CICE, France (Diploma Centre)	17-18 January 2024	12	CICE
GLSMED, Lisbon, Portugal (Diploma Centre)	2-3 February 2024	10	GLSMED
AUTH Thessaloniki, Greece (New Target Centre)	8-9 February 2024	10	CICE
MUM, Maribor, Slovenia (Diploma Centre)	14-15 February 2024	9	MUM
CAC, Porto, Portugal (Diploma Centre)	15-16 February 2024	12	CAC
ULG and EAGS, Liege/Leuven, Belgium (Diploma Centre)	1-3 March 2024	19	ULG/EAGS
FPG, Rome, Italy (Diploma Centre)	14-15 March 2024	10	FPG
UNITO, Torino, Italy (Diploma Centre)	10-11 April 2024	10	UNITO
Katowice, Poland (New Target Centre)	11-12 April 2024	10	FPG
UNINA, Naples, Italy (Diploma Centre)	17-18 April 2024	10	UNINA
Zadar, Croatia (New Target Centre)	18-19 April 2024	10	MUM
Madrid, Spain, (New Target Centre)	25-26 April 2024	10	CAC
Debrecen, Hungary (New Target Centre)	2 May, 2024	10	EAGS
Pleven, Bulgaria (New Target Centre)	6-7 June 2024	15	UNINA
Tallinn, Estonia (New Target Centre)	12 June 2024	10	UNITO
Barcelona, Spain (New Target Centre)	2-3 July 2024	10	GLSMED
FPG, Rome, Italy (Diploma Centre)	23 September 2024	10	FPG

In terms of content, the programme for the training was exactly the same in all iterations of this module and followed the original training plan as outlined in D2.1. The duration varied somewhat as some of the centres organised their module as a 1.5-day event, while others delivered it in one day. This programme was translated into all partner languages.



#### **Dublin, Ireland (New Target Centre)**

The first Basic Module took place at the Rotunda Hospital in Dublin on January 4–5, 2024 and was a resounding success. Expert trainers from GESEA4EU Mentor Centres, ULG and EAGS in Belgium, led the sessions, ensuring an exceptional learning experience.

The course attracted a total of 10 participants, all of whom expressed great enthusiasm for the innovative format. This event marked a strong and promising start to the project, setting the stage for future advancements and collaboration.







#### **CICE, France (Diploma Centre)**

CICE delivered a Basic training module on 17-18 January with 12 participants, including specialists, professionals, and residents, in a hybrid format. It was followed by an onsite assessment leading to GESEA certification.



#### **GLSMED**, Portugal (Diploma Centre)



GLSMED successfully conducted a Basic Training Module on 2-3 February. The programme included 10 participants, comprising a mix of specialists and medical residents, all eager to enhance their skills in minimally invasive gynaecological surgery. The two-day training combined interactive virtual sessions and hands-on practical exercises, ensuring participants could gain theoretical

knowledge and practical experience. The sessions were led by expert trainers who provided comprehensive guidance on fundamental techniques and tools in minimally invasive surgery. Following the training module, an onsite assessment was conducted to evaluate the participants' proficiency and understanding of the concepts covered. Those who successfully passed the assessment earned their GESEA certification.

#### **AUTH, Thessaloniki, Greece (New Target Centre)**



CICE was the mentor centre for a Basic L1/H1 module delivered to the Target Centre in Thessaloniki, Greece, from 8 to 9 February 2024. The event was hosted at the Aristotle University of Thessaloniki (AUTH). The collaboration ensured high-quality training, combining theoretical knowledge with practical experience, tailored to meet the needs of emerging professionals in the field. A total of 10 participants were involved in the training.

#### MUM, Slovenia (Diploma Centre)



The GESEA Diploma Centre in Maribor, Slovenia, hosted a Basic Course (Level 1) from 14-15 February, with 9 participants. All participants successfully completed the training and received their GESEA Certification (Level 1) on 16 February.

# CAC, Portugal (Diploma Centre)



The Diploma Centre at CETEC (CAC) in Porto, Portugal, conducted the Basic L1/H1 Module from 15 to 16 February 2024.

These sessions were attended by 12 participants and concluded with the certification process which was completed on 18 December 2024. All 12 participants in the basic course successfully passed the exam.

#### **ULG and EAGS, Belgium (Diploma Centres)**

Université de Liège (ULG) and the European Academy of Gynaecological Surgery (EAGS) conducted a joint training session at the High Breed Centre in Leuven with 19 participants from 1-3 March. This Basic Laparoscopy and Hysteroscopy course equipped specialist professionals with essential knowledge and psychomotor skills, offering a comprehensive introduction to these techniques.



The course was led by Dr Stavros Karampelas (ULG) and Dr Istvan Argay (EAGS) with the support of other qualified trainers and mentors. An official certification was performed at the end.

#### FPG, Rome, Italy (Diploma Centre)

A Basic Laparoscopy and Hysteroscopy Course, led by Dr. Campolo, was held on March 14-15 at the Fondazione Policlinico Agostino Gemelli Hospital. The two-day programme introduced 10 participants to the foundational principles, instruments, and techniques of laparoscopy and hysteroscopy. With a structured, step-by-step approach, the course focused on building essential skills. Participants were given ample opportunities to practice and enhance their techniques.

#### **UNITO, Torino, Italy (Diploma Centre)**

University of Torino, S. Anna Hospital hosted a Basic Laparoscopy and Hysteroscopy Course on April 10-11, led by Dr. Gabriele Lanzo and Prof. Stefano Cosma. Over two days, 10 participants engaged in a training programme covering the core principles, instruments, and techniques of laparoscopy and hysteroscopy. The structured curriculum emphasized a step-by-step approach to skill development, ensuring ample hands-on practice to refine surgical techniques.

#### **Katowice, Poland (New Target Centre)**

The Fondazione Policlinico Universitario Agostino Gemelli (FPG) conducted successful training session at Katowice University from April 11–12 with participants. The Basic Laparoscopy and Hysteroscopy course provided specialist professionals with essential knowledge and psychomotor serving skills, as introduction comprehensive these techniques. The programme followed the GESEA4EU curriculum and aligned with the GESEA pathway standards.



Dr. Palmieri and Dr. Mastrovito, esteemed instructors from Rome, collaborated with local trainers Dr. Ewa Winkowska and Dr. Marcin Sadlocha, under the leadership of Prof. Rafal Stojko, the course director. Their combined expertise ensured the programme's resounding success, fostering valuable learning and professional growth for all participants

#### **UNINA**, Naples, Italy (Diploma Centre)



The course, which featured the participation of 10, took place from 17-18 April, the Università Federico II di Napoli, under the leadership of Dr Improda, conducted a Basic Laparoscopy and Hysteroscopy Course The two-day course served as an introduction to both laparoscopy and hysteroscopy, focusing on the fundamental principles, instrumentation, and techniques essential for these procedures.

The course emphasised a step-by-step approach to mastering basic skills, ensuring that each participant had ample opportunity to practice and refine their techniques under the guidance of the expert team from Naples.

#### **Zadar, Croatia (New Target Centre)**

MUM was the mentor for the Basic Training Module delivered in the Target Centre in Zadar, Croatia from 18 to 19 April, with 10 participants. This course aimed to further enhance the skills of the professionals in attendance, and all participants successfully completed the course. These activities are part of ongoing efforts to improve professional standards within the GESEA framework.



#### Madrid, Spain (New Target Centre)



The Target Centre at the Hospital Universitario General de Villalba, Madrid, under the guidance of Prof. Mercedes Andeyro García, delivered the basic training module on 25–26 April 2024. A total of 10 participants enrolled in the module.

#### **Debrecen, Hungary (New Target Centre)**





On May 2, 2024, the Target Centre in Debrecen, Hungary, hosted a Basic Training Module under the expert guidance of Dr. István Argay. This event marked a significant milestone for the centre, which has been meticulously prepared to deliver GESEA4EU courses, aligning with

international standards for surgical education. A total of 10 participants was involved in the training. Target Centre's state-of-the-art facilities provided an ideal learning environment, featuring advanced simulation equipment and tailored resources to enhance the participants' training experience.

#### Pleven, Bulgaria (New Target Centre)

The first Basic Laparoscopy & Hysteroscopy course at the Heart and Brain Centre of Clinical Excellence in Pleven, Bulgaria, took place from 6 to 7 June. Led by the University of Naples, the course provided 15 young specialists with a fully immersive, hands-on training experience.



#### **Tallinn, Estonia (New Target Centre)**

On June 12, 2024, the University of Turin conducted the first Basic Laparoscopy & Hysteroscopy course at the newly established Target Centre in Tallinn, Estonia. A total of 10 participants attended the course.



#### **Barcelona, Spain (New Target Centre)**

The Target Centre at Hospital de la santa Creu i Sant Pau in Barcelona, led by Prof. Dr. Filipa Osorio and Dr. Sonia Barata from Lisbon, alongside Dr. Pere Brescó from Barcelona, successfully delivered the Basic Training Module on 2–3 July 2024. The module was attended by 10 enrolled participants.



#### FPG, Rome, Italy (Diploma Centre)





The team at Gemelli Hospital in Rome continued their busy schedule of GESEA4EU Courses under the leadership of Dr. Federica Campolo on September 23, 2024.

This Basic Laparoscopy and Hysteroscopy course took place

of Woman's and Child Department health and **Public** Health Sciences/Gynaecologic Oncology Unit of the hospital and attracted an enthusiastic group of 10 specialists. Participants were specifically selected to represent all European regions. This course was organised in collaboration with the European Board and College of Obstetrics and Gynaecology (EBCOG), aligning with one of the main objectives of the GESEA4EU project: achieving recognition from this prestigious society. Hosting such a course marks a significant milestone, as it exemplifies the strong partnership and mutual commitment between ESGE and EBCOG to advance minimally invasive surgical training and expertise.

# Intermediate Laparoscopy/Hysteroscopy

Module	L2/H2/G1/G3
Title Intermediate Laparoscopy/Hysteroscopy plus Remote Consultations, Endoscopic Surgery and Patent Wellbeing, C Educational Programme	
90 for L2/H2, 10 from each Diploma Centre 270 in total for all iterations of G1 300 in total for all iterations of G3	
Actual number of participants	92 participants 196 in total for G1 also given to L1/H1 466 in total for G3, also given to participants in L2/H2 and some in L7/H8, L6/H7

The Intermediate Laparoscopy and Hysteroscopy courses were run as planned in hybrid format, with participants first enrolled in the online platform to follow the online components, followed by hands-on training in one of the centres offering the courses. Planning for these courses began in the summer of 2023, with the first session taking place in February 2024. This involved delivery of the course in existing GESEA Diploma centres. These courses were all advertised on the GESEA4EU website as well as through the promotional channels of the Centre delivering the course. The delivery of the L2/H2 Intermediate course involved 92 participants.

While all courses followed the established programme, some centres opted to condense the activities into a single day to accommodate participant schedules. This flexibility, coupled with the varying availability of participants at each centre, also contributed to differences in attendance and enrolment figures.

The assessment for these modules is conducted in accordance with the GESEA Certification Level 2 standard aligning with the established GESEA pathway. The certification outcomes play a crucial role in the reporting for Work Package 4 (WP4), showcasing the progress and achievements of this initiative.

In addition to the courses organised uniquely by each diploma centre, it was decided to organise a collaborative course as a partnership between ULG and EAGS.

This initiative aims to unite the expertise of both faculties while bringing together participants from across Belgium. By combining resources and knowledge, the course offered an enriched learning experience, fostering a spirit of collaboration and innovation.

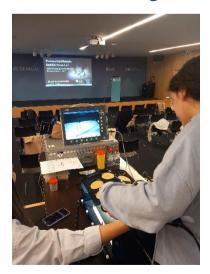


Location of Diploma Centre	Date of delivery	Participants	Led by
GLSMED. Lisbon, Portugal	2 February 2024	12	GLSMED
CAC, Porto, Portugal	16-17 February 2024	10	CAC
ULG and EAGS, Liege/Leuven, Belgium	3-5 March 2024	21	ULG/EAGS
MUM, Maribor, Slovenia	12-13 March 2024	10	MUM
FPG, Rome, Italy	16-17 March 2024	10	FPG
UNITO, Torino, Italy	15-16 May 2024	9	UNITO
UNINA, Naples, Italy	16 May 2024	10	UNINA
CICE, Clermont-Ferrand, France	17 July 2024	10	CICE

#### **GLSMED.** Lisbon, Portugal

The Diploma Centre at GLSMED in Lisbon, Portugal, hosted the Intermediate L2/H2 Module on February 2, 2024. This comprehensive programme was attended by 12 participants and culminated in a formal certification process, marking the successful completion of the module.

#### CAC, Porto, Portugal



The Diploma Centre at CETEC (CAC) in Porto, Portugal, conducted the Intermediate L2/H2 Module from February 16 to 17, 2024.

This module was attended by 10 participants and concluded with the certification process which was completed on December 18, 2024.

6 out of the 10 total participants in the intermediate course successfully passed the final exam.

#### **ULG and EAGS Belgium**



From March 3 to 5, 2024, the Diploma Centre in Liège and EAGS, Belgium, conducted the Intermediate L2/H2 Module. The programme welcomed 21 participants and ended with a formal certification process. Approx 80% of participants successfully passed the final examination, an extremely strong result. This course was once again led by Dr Stavros Karampelas (ULG) and Dr Istvan Argay (EAGS).

#### MUM, Maribor, Slovenia

The GESEA Diploma Centre in Maribor, Slovenia, hosted an Intermediate Module (Level 2) from March 12 to 13, with 10 participants. All participants successfully completed the training and received their GESEA Certification (Level 2) on March 14th.

#### FPG, Rome, Italy

The Intermediate L2/H2 Module was successfully held at FPG in Rome from 16–17 March 2024, under the guidance of Dr. Federica Campolo. This highly specialised module attracted 10 dedicated participants who undertook intensive training sessions designed to advance their skills and knowledge.

Following the completion of the module, participants underwent the certification process, which took place in May 2024. All 10 participants demonstrated exceptional competence and successfully passed the final examination, earning their certifications. This remarkable 100% success rate underscores the effectiveness of the training programme and the commitment of both the faculty and participants to achieving excellence in minimally invasive surgical education

#### **UNITO, Torino, Italy**

The Intermediate L2/H2 Module was held at Università di Torino on 15-16 May 2024, led by Dr. Gabriele Lanzo and Prof. Stefano Cosma. This intermediate training programme brought together 9 highly motivated participants for an intensive series of sessions designed to refine their skills and deepen their expertise in minimally invasive surgery.

At the end of May, participants proceeded to the certification process. Demonstrating exceptional skill, all ten successfully passed the final examination, earning their certifications and achieving a flawless success rate.

#### **UNINA**, Naples, Italy

The Intermediate L2/H2 Module was held at Università Federico II in Naples on May 16, 2024, under the leadership of Dr. Francesco Improda. A total of 10 participants took part in the training, gaining valuable insights and practical experience in intermediate-level techniques and procedures. Upon completing the module, participants underwent the certification process at the end of May. All 10 participants excelled in the final examination, achieving their certifications with a perfect success rate.

#### CICE, Clermont-Ferrard, France

CICE organised an Intermediate Module from July 17 to 18 which included an onsite assessment, resulting in GESEA certifications for all the participants. A total of 10 specialists participated at the course.



#### **MIGS Clinical Attachment**

Module	L3 & H3
Title	MIGS Clinical Attachment
Original target 2 trainees per Fellowship Centre – total	
Actual number of participants	8 planned – 1 traineeship has begun.

The L3 and H3 modules, titled MIGS Clinical Attachment, were designed to accommodate 8 participants across four fellowship centres: AUTH, CICE, PIUSH, and FPG. The plan is for each centre to host two trainees, making this a carefully structured programme which lasts between 12 and 24 months. These onsite modules require participants to have obtained GESEA Level 2 MIGS certification prior to enrolment, ensuring a high standard of competence among trainees. The assessment for these modules will adhere to the MIGS Level 2 diploma standards.

This fellowship programme, established by the European Society for Gynaecological Endoscopy (ESGE), represents a significant step forward for the society, aiming to advance minimally invasive gynaecological surgery training across Europe. The curriculum is fully defined, and enrolment is ongoing with all Fellowship Centres already well advanced in identifying their participants, and notably, one traineeship has already commenced.

This longer-term clinical attachment will continue beyond the timeline of the project, ensuring sustainability and long-term value. However, it is important to highlight a major challenge that has arisen in implementing the programme due to the varying insurance policies for surgeons across different countries. To ensure success, all participating centres must adhere to a unified programme structure and maintain consistent conditions for trainees where local regulations allow. This uniformity of programme content is essential to guarantee equitable learning opportunities and uphold the high standards of the programme.

# **Advanced Laparoscopy**

Module	L4
Title	Advanced Laparoscopy
Original target	50 selected Level 2 Diploma holders
Actual number of participants	50 Level 2 Certificate holders enrolled

The Advanced Laparoscopy Course is an entirely online programme tailored for 50 participants who are Level 2 GESEA Certificate holders. This specialised course is designed to provide in-depth theoretical knowledge and practical insights into advanced laparoscopic techniques, ensuring participants further enhance their expertise in minimally invasive surgery.

By leveraging an online format, the course offers flexibility and accessibility, allowing participants to engage with high-quality educational content, live interactive sessions, and case discussions from anywhere in the world. The programme features renowned faculty members, cutting-edge materials, and a curriculum specifically developed to meet the advanced training needs of experienced laparoscopic surgeons.

The decision to adjust from enrolling Level 2 Diploma Holders to Level 2 Certificate holders was taken as the knowledge provided in this module needs to be reached

before participants reach the expected surgical level of competence required for obtaining the diploma.

# **Digital Hysteroscopy Centre**

Module	H4
Title	Digital Hysteroscopy Centre
Original target	10, 5 each from EAGS and FPG
Actual number of participants	10 all from FPG

The H4 Digital Hysteroscopy Centre module was held on-site at the Gemelli Training Centre on 14 October 2024, with 10 participants, all of whom were from FPG. This learning module, designed for Specialist Professionals, was originally planned as a hybrid format, combining online e-learning materials with on-site training. However, for this first iteration, the planned online lectures were delivered live. These lectures were recorded and will be made available on the online learning platform for future iterations of the module.

The on-site component emphasised the development of psychomotor skills through practical sessions, including the use of transvaginal simulators, to prepare participants for work in the Digital Hysteroscopy Centre (DHC).

The decision to host this module at Gemelli Hospital was driven by its distinction as home to the Digital Hysteroscopy Centre (DHC) – Class Hysteroscopy. As the third centre of its kind globally, Gemelli Hospital provided state-of-the-art facilities, access to all necessary materials, and the support of the highly skilled Class Hysteroscopy team. Their expertise was instrumental in ensuring the success of the training.

Participant assessment was conducted using an Objective Structured Clinical Examination (OSCE) protocol established under WP4, ensuring a standardised and rigorous evaluation of the skills acquired during the module.

#### **Robotics**

Module	R1
Title	Robotics
Original target	45 made up of 5 joint modules for 9 trainees each coming from FPG and SERGS. This target was discussed with our PO in July 2024 and reduced to 27 due to a lack of availability of simulators for the module.
Actual number of participants	29 Participants

Where	When	Participant's country of origin	Number
Marseille	01/10/2024	France	5
Marseille	01/10/2024	Hungary	3
Marseille	01/10/2024	Greece	3
Marseille	01/10/2024	Italy	3
Rome	25-27/11/2024	Italy	6
Rome	25-27/11/2024	Portugal	5
Rome	25-27/11/2024	Greece	3
Rome	25-27/11/2024	EBCOG (Turkey)	1

The first iteration of the advanced robotic training module took place during the annual ESGE Congress in Marseille, offering a vibrant platform for education and innovation. 14 participants, from across Europe, attended the official Robotic Training and Certification Session as part of the congress. This exceptional opportunity enabled attendees to explore the latest robotic techniques and technologies in a collaborative and inspiring setting, under the guidance of esteemed experts in the field.

Building on the success of the Marseille session, the second iteration took place from November 25 to 27, 2024, at Gemelli Hospital, with 15 participants. The session featured

four state-of-the-art simulators and personalised one-to-one teaching modules. Eligibility criteria required participants to either hold a GESEA Level 2 certification by the project's conclusion or be certified SERGS surgeons. Each participant underwent a comprehensive one-day programme, including three hours of intensive training, followed by a final assessment.

The programme for this training that was followed during both iterations of this module was as follows:



# **Modules aimed at Nurses**

# Laparoscopy/Hysteroscopy for Nurses

Module	L5/H5
Title	Laparoscopy for Nurses/Hysteroscopy for Nurses
Original target	24, 2 nurses per Diploma/Training Centre
Actual number of participants	26 for L5 and 15 for H5 as well as 25 from Cyprus for adapted module.

To broaden training opportunities, an additional module based on L5/H5 was organised on 14th September 2024 at the University of Cyprus (UNIC), with approximately 25 participants. This one-day programme was tailored specifically for nurses currently supporting or preparing to support laparoscopic or hysteroscopic surgeries and so used an adapted version of the L5/H5 module.

The complete L5/H5 Laparoscopy and Hysteroscopy for Nurses modules, originally intended as hybrid courses, were delivered entirely on-site at the Gemelli Training Centre, Gemelli Hospital, on 15 October (Hysteroscopy) and 16 October 2024 (Laparoscopy).

All participants were from Gemelli Hospital, primarily due to a challenge with travel expenses and reimbursement policies at certain universities, as well as scheduling constraints for nurses. Furthermore, language barriers created additional difficulties, as only a minority of the nurses were proficient in English. The lectures, originally planned as live online sessions, were instead recorded on-site. These recordings will be uploaded to the e-learning platform for use in future iterations of the course.

All assessments for these modules were carried out using an Objective Structured Clinical Examination (OSCE), in accordance with WP4 guidelines, to ensure a rigorous evaluation of participants' skills and knowledge.

# **Digital Hysteroscopy Centre for Nurses**

Module	Н6	
Title	Digital Hysteroscopy Centre for Nurses	
Original target	10, 5 each from FPG and EAGS	
Actual number of participants	12 all from FPG	

The H6 Digital Hysteroscopy for Nurses module was successfully conducted on-site at the Gemelli Training Centre on 14 October 2024, with 12 participants—exceeding the initial target of 10.

Specifically designed for nurses, this module provides essential knowledge and skills to prepare for and assist surgeons in a Digital Hysteroscopy Centre (DHC). The training included hands-on demonstrations of instrumentation and lectures supported by comprehensive slide presentations, ensuring a well-rounded learning experience.

Originally intended as a hybrid course, the module was delivered fully on-site for its first iteration. The lectures were recorded during the session and will be uploaded on the elearning platform, enabling the module to be offered in a hybrid format for future participants.

We chose to host all courses at Gemelli Hospital due to the presence of the Digital Hysteroscopic Centre (DHC), officially recognised as the third in the world. This unique facility provides participants with the opportunity to train live in the operating room (OR), gaining direct exposure to the workflow, setting, and patient care pathways specific to a digital hysteroscopy centre. This hands-on experience enhances the training's value and prepares nurses to seamlessly integrate into similar environments in their respective institutions.

#### **Robotics for Nurses**

Module	R2
Title	Robotics for Nurses
Original target	10 participants coming from FPG
Actual number of participants	10 participants coming from FPG

The Robotics for Nurses module, held on 17 October 2024, at the Gemelli Hospital, provided 10 participants with comprehensive and engaging experience in robotic-assisted surgery (RAS).

After an initial welcome, the programme covered a thorough introduction to RAS, a deep dive into the roles of the robotic surgical team, and a dedicated session on digital skills for e-nursing. Best practices and protocols were presented to ensure safety and efficiency in robotic procedures.

The training benefited from the state-of-the-art robotic operating rooms (OR) and robotics training centre available at Gemelli Hospital. After a coffee break, the day continued with a virtual visit to the ORs, where participants explored topics such as robotic technology, the roles of nurses, patient preparation and management, intraoperative monitoring, robotic system demonstrations, the use of service instruments, documentation, and a live surgery observation.

The hands-on exposure to these advanced robotic facilities provided participants with an in-depth understanding of the technology, processes, and best practices in robotic-

assisted surgery, preparing them to support such procedures confidently in their own institutions.



The training culminated in a structured assessment conducted through Objective Structured Clinical Examinations (OSCE) following SERGS guidelines. This rigorous evaluation ensured that participants not only gained theoretical knowledge but also demonstrated practical competencies essential for supporting robotic-assisted surgeries confidently in their own institutions.

# Modules aimed at non-clinical staff

# Laparoscopy/Hysteroscopy for Equipment Operators/Technical Support staff

Module	L6/H7/G4
Title	Laparoscopy/Hysteroscopy for Equipment Operators/Technical Support staff and GESEA Administration

Original target	15, one in each country for L6/H7 and 12 do G4
Actual number of participants	15 enrolled

The decision to combine the on-site L6/H7 module with the online G4 module was taken as it became clear that in each Diploma or Training Centre, staff members could be identified who were responsible for supporting the operation of the equipment and GESEA Administration.

#### **Modules aimed at Trainers**

# **Laparoscopy/Hysteroscopy for Training Specialists**

Module	L7/H8/G5	
Title	Laparoscopy/Hysteroscopy for Training Specialists, Motivation and Communication	
Original target	54 made up of 3 per Diploma Centre and 2 per Target Centre	
Actual number of participants	First iteration in December 2023 – 22 participants Second iteration in April 2024 – 23 participants Extra iteration in September 2024 - 2 participants Third iteration in December 2024 - 7 participants Total - 54	

The Laparoscopy for Training Specialists (L7), Hysteroscopy for Training Specialists (H8), and Motivation and Communication (G5) modules were successfully delivered in Gemelli Hospital (FPG), Rome, Italy using 10 stations.

There were 3 iterations of these modules as well as an extra iteration in September for two trainees from Bulgaria.

The first session, held over 1.5 days on December 18–19, 2023, welcomed 26 participants and focused on building key technical and interpersonal skills essential for specialist training.

- The second one day iteration took place on 8-9 April 2024 and involved 22 participants.
- The third iteration took place on 16 December 2024 and involved 9 participants

The course consisted of three in-person modules:

- L7. Laparoscopy for Training Specialists: This module provided prospective trainers with critical technical and interpersonal competencies necessary for teaching laparoscopic procedures, covering both theoretical knowledge and psychomotor skills.
- H8. Hysteroscopy for Training Specialists: This module focused on developing trainers' abilities, both technical and non-technical, to instruct hysteroscopic techniques, blending theoretical principles with essential psychomotor skill training.
- G5. Motivation and Communication: This module equipped trainers with specialized motivation and communication strategies, enabling them to effectively engage participants, sustain motivation, and handle unexpected scenarios or challenging interactions.

Together, these modules prepared trainers to lead well-structured, engaging, and effective training sessions for future specialists.

The Director for these modules was **Prof Vasilios Tanos** MD, PhD, GESEA Chair. He was supported by the following faculty members:

- Dr Federica Campolo FPG
- Dr Ursula Catena FPG
- Dr Gabriele Lanzo UNITO
- Dr Francesco Paolo Improda UNINA
- Dr Istvan Argay EAGS
- Dr Stavros Karampelas ULG
- Dr Branka Zegura Andric MUM

These modules also involved ten observers who were all residents in Gynaecology from FPG as well as two communication evaluators: Dr Luca Palmieri and Saverio Gravina. Further details of the first iteration of the L7/H8/G5 TTT course held in Rome in December 2023 are available in D3.1 which includes the course agenda.

The second edition of the Training the Trainers (TTT) course took place on 8-9 April 2024, with the involvement of 22 participants. This edition featured several exciting

updates and innovations, enhancing its success compared to the previous iterations. One significant change was the decision to condense the course into a one-day format, streamlining the training while ensuring it remained comprehensive and engaging. This adjustment allowed us to deliver the core content more efficiently, without compromising on the quality of learning.

Furthermore, a new simulation session was introduced, which became a major highlight of the course. During this session, participants took on the roles of both **trainer** and **trainee**, enabling them to experience the dynamics of the training process from both perspectives. This role-playing approach provided invaluable insights into the challenges and responsibilities of being a trainer, while also emphasising the importance of empathy and communication in the learning process. The feedback from participants was overwhelmingly positive, with many appreciating the hands-on nature of the simulation and how it enriched their understanding of teaching techniques. Based on the success of this addition, we've decided to make it a permanent part of the training programme moving forward.

In September, an unexpected situation arose when two participants from Bulgaria arrived at Gemelli for the TTT course due to a booking error with their flights. Despite this mix-up, we ensured they were fully accommodated by offering them the same comprehensive training programme. They were able to participate in all modules, including Laparoscopy, Hysteroscopy, and Motivation & Communication, and even took part in the newly introduced simulation session. We were pleased to offer them the opportunity to catch up on what they had missed and ensure they received the full learning experience, which they greatly appreciated. This flexibility helped maintain the high standards of the programme and reinforced our commitment to providing excellent training for all participants, regardless of the circumstances.

To ensure we reached the full complement of participants for the course, we organised a final session in December 2024, specifically catering for 9 participants. This allowed us to accommodate those who had been awaiting a spot, ensuring the programme remained accessible to all interested candidates. The renewal programme was also reoffered with great success, receiving excellent feedback from participants who appreciated the updates and the overall learning experience. The continued positive response underscores the effectiveness of the changes and the ongoing demand for high-quality training for GESEA trainers.

The assessment for the TTT course was conducted using the OSCE (Objective Structured Clinical Examination) method, in strict adherence to the guidelines outlined in WP4. To ensure a thorough and unbiased evaluation, the assessments were performed retrospectively, after the completion of the courses for all participants. This approach

allowed for a comprehensive review of each participant's skills and knowledge across the different modules, ensuring that the assessment was both fair and aligned with the high standards of the programme. The feedback gathered from this process was invaluable in refining the course and ensuring that all participants met the required competencies to become certified GESEA Trainers.

The original target for this module was to enrol 3 trainees from each of the Diploma Centres and 2 from each Target Centre. By the end of the project, all Diploma Centres have provided at least one trainee for this TTT module. In terms of the Target Centres, 6 of these 8 Centres provided at least one trainee.

The absence of participants from Spain, specifically from the centres in Madrid and Barcelona, was largely because the two directors of these centres, who have been heavily involved in the GESEA programme since its inception, no longer needed to attend the course. These directors have played a pivotal role in the development and evolution of the GESEA programme, including the creation of the new TTT format.

Due to their extensive experience and deep involvement, they are already fully qualified to act as trainers for their respective centres and were therefore exempt from the training. They will continue in their roles as trainers, ensuring the ongoing success and growth of the GESEA initiative in Spain.









# **Laparoscopy/Hysteroscopy for Training Nurses**

Module	L8/H9	
Title	Laparoscopy/Hysteroscopy for Training Nurses	
Original target	12, I from each Diploma and Training Centres	
Actual number of participants	19 Participants	

This course was organised in FPG in Rome on 19-20 December 2023 and was designed for those planning to train operating room nurses who want to increase their knowledge in the field of minimally invasive surgery.

It was made up of two parts:

- L8. Laparoscopy for Training Nurses: This learning module is aimed at those
  wishing to train nurses to provide them with the skills (technical and nontechnical) to deliver training on hysteroscopic nursing in the OR and outpatient
  settings.
- H9. Hysteroscopy for Training Nurses: This learning module is aimed at those
  wishing to train Nurses to provide them with the knowledge and skills to prepare
  and support the surgeon in the operating room during laparoscopic procedures.

The module was divided into a theoretical part with a validated programme, PowerPoint presentations and videos to help participants understand and quickly learn the principles and the procedures of correct nursing assistance in minimally invasive surgery. Experts in instruments and equipment management taught and provided information and guidelines in cleaning maintenance and sterilization. The theoretical part is available on the GESEAEU4 platform section for nurses. Each nurse needed to register and follow the presentations on the e-learning platform and all participants in this module were registered in advance of the module delivery in Rome.

The second part of the module aimed to teach nurses how to use several devices essential for MIS. All participants learned about the instruments/equipment, and they then practised the instruments' preparation, and the setup as needed in the OR. They also assisted as instrumentalists and running nurses for the most frequent endoscopic interventions in gynaecological surgeries.

#### Module Leadership and operation

The director of this module was Prof Vasilios Tanos, MD, PhD, and GESEA Chair.

He was supported by the following faculty members:

- Dr Federica Campolo, FPG
- Dr Ursula Catena, FPG
- Dr Stavros Karampelas, ULG
- Dr Branka Zegura Antic, MUM
- Dr Istvan Argay, EAGS

#### **Educational needs and expected outcomes**

The importance of the specific nursing work and tasks during Diagnostic and Operative Laparoscopy/Hysteroscopy was stressed. The difficulties of single-access surgery like hysteroscopy were also explained. To understand several major endoscopic surgery issues e.g. fluid balance in hysteroscopy, the pre-operative patient preparation, patient positioning, and quick nurse response during a difficult case were all demonstrated. The total time of Hands-on Training (HOT) for this course is estimated to be 8 hours.

For a full description of this course, see D3.1 which includes the course agenda.

Participants took part from the following centres:

Centre	Country	Туре	Number Participants
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FPG	Italy	Diploma	7
мим	Slovenia	Diploma	2
CAC	Portugal	Diploma	2
ULG	Belgium	Diploma	2
UNITO	Italy	Diploma	2
UNINA	Italy	Diploma	2
PiusH	Germany	Training	1
Croatia	Croatia	Target	1

# **Robotics for Training Specialists**

Module	R3
Title	Robotics for Training Specialists
Original target	10, 5 from FPG and 5 from SERGS
Actual number of participants	10 participants



The module, held on March 18, 2024, at FPG Hospital in Rome, Italy, involved a group of 10 participants, consisting of 5 from SERGS and 5 from FPG.

Tailored for surgeons certified in Robotic-Assisted Surgery (RAS) who are actively practising in the field, the course aimed to equip these trainers with the necessary expertise to effectively teach and mentor others in robotic-assisted gynaecological endoscopy procedures. Additionally, it prepared them to provide expert guidance during the R1 module.

Centre	Country	Туре	Number Participants
FPG	Italy	Diploma	5
SERGS	Belgium	Diploma	5

# **TTT Course for Robotic Surgeons**

How to train trainees for the GESEA Level 2 robotic certification.

GTC Gemelli Training Centre - March 18th, 2024

Time	Session
8.45-9.00	Welcome with a cup of coffee
9.00-9.15	Round table who is who
9.15-12.45	Part 1: How to train a trainee?
9.15-9.45	Introduction to the concept of TTT (30 min)
9.45-10.00	Trainers' competence (online Tom Inds) (15 min)
10.00-10.15	Cognitive Overload (15 min)
10.15-10.30	Performance enhancing instructions (from level 1-5) (15 min)
10.30-10.45	MCQS series 1 (15 min)
10.45-11.00	Coffee Break
11.00-11.15	The training episode intro to the concept
11.15-11.30	Verbal and physical set (SEAS) (15 min)
11.30-11.45	Dialogue (SIX STEPS) (15 min)

11.45-12.00	Closure (GIFTS) (15 min)
12.00-12.15	How to deal with a difficult trainee?
12.15-12.30	Proficiency Based Progression
12.30-12.45	MCQS series 2 (15 min)
12.45-13.45	Lunch break
13.45-15.00	Part 2: Introduction to simulation exercises and training
13.45-14.00	Selection criteria for exercises and rationale of the curriculum.
14.00-15.00	Exercises and tips and tricks
15.00-15.30	Part 3: How to set a day of training on the simulator to achieve improvements for the trainees.
15.30-15.45	Coffee break
15.45-17.00	Part 4: Serious game

# **Robotics for Training Nurses**

Module	R4	
Title	Robotics for Training Nurses	
Original target	5 all from FPG	
Actual number of participants	7 all from FPG	

The Robotics for Training Nurses (R4) module, held on 18 October 2024 at Gemelli, aimed to provide advanced training for nurses certified in robotic-assisted surgery (RAS)

in order that they in turn could train nurses in robotics. With 7 participants, the course was designed to enhance their ability to teach and train others in nursing practices during robotic-assisted procedures, with a particular focus on gynaecological endoscopy. It also emphasised empowering nurses to offer expert guidance and support during the R2 module, ensuring high standards of accuracy and expertise in their practice.

Originally planned as a hybrid, this module was delivered fully onsite. However future iterations will include an online element based on the lectures that were recorded during this course in Rome.

#### **Modules aimed at General Practitioners**

# **Endoscopic Surgery and Patient Wellbeing**

Module	G2
Title	Endoscopic Surgery and Patient Wellbeing
Original target	50
Actual number of participants	460

This online module was aimed at selected General Practitioners, providing a foundational understanding of endoscopic surgery in gynaecology and its benefits for patients. It exceeded expectations with 460 participants enrolled, far surpassing its initial target of 50, reflecting significant interest in the subject matter. Assessment of this online course is delivered via an online quiz.

The success of this initiative is due in part to the collaborative efforts of several prominent institutions. The Centre of Liege is also involved in this project, contributing their expertise and resources to enhance the training experience. Furthermore, Università Cattolica del Sacro Cuore in Gemelli has played a pivotal role by providing opportunities for gynaecological students to participate in this programme. This collaboration has significantly contributed to the high number of participants, ensuring a diverse and engaged group of learners eager to advance their skills in minimal-access surgery.

# **Materials and Learning Platform**

In this final section, we would like to provide an overview of the materials that have been created for the GESEA4EU Project. These materials support all fully online courses as well as the online parts of the hybrid courses.

# e-Learning Platform

The e-learning platform is managed and supported by ESGE within the ESGE Academy Website and is carefully password protected. Access to GESEA4EU course participants is managed by ESGE who record who has access to each of the courses on the platform which also provides the assessment and certification service for all GESEA courses.

In practice what has happened throughout the project is that the GESEA4EU Team in the ESGE Office receives participants' information from each of the course organisers and proceeds further with enrolment. All participants of the project receive a personalised email informing them of the available curriculum.

Existing users on the ESGE Academy website are simply enrolled and informed.

For New Users an account is created, and, via an email, they are informed of the enrolment. Credentials to their new accounts are provided apart for security reasons.





Screenshots from ESGE Academy of the different courses offered

#### **Video Resources**

The GESEA library of courses consists of video presentations that are organised in modules. These videos have all been selected or created specifically for the purpose of the course library. The subject of each presentation and the relevant content expert were selected by the course editorial committee made up of experts from ESGE and EAGS. From the beginning of March 2023, the experts were invited by the Central Office, to start creating their presentations. Each of these videos was either to be recorded specifically for the GESEA4EU project or to be adapted from a video resource previously recorded, in order to make the content suitable for the GESEA Course Programme. The largest majority (about 85%) was created specifically for the course.

Meanwhile, the AV team at ATiT had prepared and distributed a design template to ensure that all videos had a similar look and feel and to ensure a consistent signposting to organise the structure of the content in the different modules. They also provided the course presenters with a document that included recommendations and guidelines for the recording of their presentations.



Set of Presentation Templates for GESEA Presenters

The presenters were given two different options to record and submit their presentations:

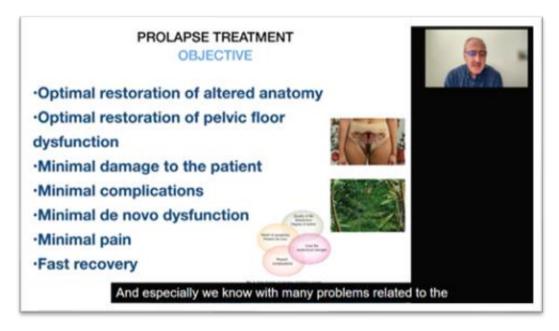
1. Live recording remotely via Zoom Pro with multichannel recording. Audio and video tracks are recorded in high quality (1080p) in order to have maximum flexibility for editing and corrections when necessary. This method had as an

additional advantage that during the recording an AV specialist from ATiT could monitor the quality of the presentation recordings. The vast majority of presenters chose to record their presentations remotely. For this, a dedicated online booking scheduler was put in place to allow the presenters to flexibly book their recording time slot with the AV team. This was automated to send reminders and notifications when necessary.

Each session of live recording took about one hour.

2. Self-recording at home on PowerPoint or Keynote. When necessary, the AV team provided instructions beforehand and feedback during the recording.

From 10 May 2023 until 16 October 2024, a total of 140 distinct video resources have been created in this way. The presentation videos are all in the format presentation + presenter (talking head) and because of the specific nature of the content, a large part of the videos contain beside text and illustrations also video materials from surgeries and dissections. This imposed some quality requirements on the recordings and on the editing process. The video recordings were assembled in ATiT and edited by a dedicated editor on a Premiere Pro workstation. Editing included topping and tailing the rushes, editing out technical errors or mistakes and repetitions by the presenter, normalising the audio, and finally transcribing the audio into text. Editing the videos and extracting the transcripts took on average 3 hours per video.



Example of presentation with transcript

The transcripts were generated by Premiere Pro in the first place, then they were corrected part manually and part automatically by means of <a href="https://speechtext.ai/">https://speechtext.ai/</a>, a

Speech to Text generator that is based on Artificial Intelligence and that was selected for its high degree of reliability and accuracy. We further made use of AI systems to assist the transcription for finding correct medical terminology.

Transcription was done for two reasons: first of all, to make the content more accessible and secondly, to allow for translated versions (with subtitles) in the 8 different native languages of the GESEA4EU project partners (English, Dutch, French, Italian, German, Slovenian, Greek, Portuguese). The transcript format used is the SRT format, or SubRip Subtitle, the most popular subtitle file format for video content. These plain text files include the text of the subtitles in sequence, along with the start and end time codes. They can be translated automatically with respect of the timing format by means of advanced automatic translators such as Deepl.



Example of srt file with transcript

Each video starts with a screen indicating the name of the course and module for which it has been developed and the name and country of the expert who has created the video; the necessary references to the GESEA4EU project and the funding source conclude each video. (See image on previous page.)

The videos were made available online in a dedicated user-friendly review platform on Vimeo to each of the presenters, in order for them to inspect and review their own video presentation and the transcribed text, and to provide suggestions for corrections or improvements when necessary. At this stage the presenters were invited to review their own presentation a last time before publishing these, the presenters were also invited for a last time to review and correct the English transcripts. In practice, it means

that each video has gone through at least 4 steps of quality control before they are ready for publication. The processing of the transcripts, the translation into the 7 other languages and the ingestion in the Teachable platform took again on average about 3 hours per video.

All videos are made available to the users via the ESGE GESEA Teachable e-learning Platform where each of them is accompanied by a set of MCQ questions related to the topic in order to evaluate the knowledge gained by the users. Each video lasts between 7 and 69 minutes and is presented by an expert in the field. The choice of language for the subtitling is done by the user on the Teachable platform.

The break-down per module is as follows:

Level	Module Name	Number of Presentations
G1	Remote Consultations	1
G2	Endoscopic Surgery and Patient Wellbeing	1
G3	GESEA Educational Programme	1
G4	GESEA Administration	1
G5	Motivation and Communication	4
G6	Managing Online Training Sessions	1
H1	Basic Hysteroscopy	12
H2	Intermediate Hysteroscopy	5
H4	Digital Hysteroscopy Centre	2
H6	Digital Hysteroscopy for Nurses	2
H7	Hysteroscopy for Equipment Operators	1
H8	Hysteroscopy for Training Specialists	5
H9	Hysteroscopy for Training Nurses	12
L1	Basic Laparoscopy	11
L2	Intermediate Laparoscopy	17
L4	Advanced Laparoscopy	30
L6	Laparoscopy for Equipment Operators	1
L7	Laparoscopy for Training Specialists	5
L8	Laparoscopy for Training Nurses	7

R1	Robotics	6
R2	Robotics for Nurses	3
R3	Robotics for Training Specialists	9
R4	Robotics for Training Nurses	3

GESEA Course Content Overview



Impression of the diverse GESEA4EU Course presentations