

Training The Trainers in Gynaecological Robotic Surgery e-Learning Course

Course Literature

Prepared by Thomas Ind

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Acknowledgements

The methods taught in this e-learning course are not original. I acknowledge those at LapCo who introduced me to the subject. Much of the information contained in this course is derived from what I learnt attending LapCo courses. It is not intended to replace a physical in person course with practical training that I found so valuable attending a LapCo TTT course. It is, however, an introduction to the concepts of what is required to train students in surgery. I hope that this e-learning course will open up your "unconscious incompetence" as a trainer and help you concentrate not so much as to what you teach (although important) but also how you go about training an aspiring surgeon learning a technical task and a high stakes skill.

I would like to thank all of those who volunteered to overact in the videos. They include;

Aslam Shiraz

Ellen Nelissen

Deirdre Nally

Ohad Feldstein

Marielle Nobbenhuis

Ariane Sickinghe

Marie Tanaicao

I would also like to thanks Captain Mark Hamwee (friend and airline pilot) for his insights into training pilots and Miss Emily Ind (daughter and trainee teacher) for her insights into teacher training.

Module Links

Module 1	10 minutes	https://www.surveymonkey.co.uk/r/6BWJQ7C
Module 2	25 minutes	https://www.surveymonkey.co.uk/r/L8HC3H6
Module 3	12 minutes	https://www.surveymonkey.co.uk/r/NC9XG36
Module 4	12 minutes	https://www.surveymonkey.co.uk/r/BS8MTH5
Module 5	8 minutes	https://www.surveymonkey.co.uk/r/PYPXR6Z
Module 6a	8 minutes	https://www.surveymonkey.co.uk/r/B7YXKD5
Module 6b	4 minutes	https://www.surveymonkey.co.uk/r/WJBZM6Q
Module 6c	6 minutes	https://www.surveymonkey.co.uk/r/WHPPZ5W
Module 6d	10 minutes	https://www.surveymonkey.co.uk/r/WP2J5Q3
Module 7	12 minutes	https://www.surveymonkey.co.uk/r/S76YQ37
Module 8a	4 minutes	https://www.surveymonkey.co.uk/r/X8DH562
Module 8b	10 minutes	https://www.surveymonkey.co.uk/r/KY5SLJJ
Module 8c	7 minutes	https://www.surveymonkey.co.uk/r/2R2PBLG
Module 9	5 minutes	https://www.surveymonkey.co.uk/r/6HRLYP7
Module 10	13 minutes	https://www.surveymonkey.co.uk/r/GJDP63D
Module 11	5 minutes	https://www.surveymonkey.co.uk/r/73CLH5R
Module 12	15 minutes	https://www.surveymonkey.co.uk/r/GSKRRF7

PLEASE ENSURE YOU INFORM THE SERGS SECRETARY THAT YOU ARE DOING THE COURSE (lucie.lamlova@sergsmail.org)

THE COURSE MODERATOR WILL BE INFORMED WHEN YOU HAVE COMPLETED EACH MODULE AND WILL KEEP A RECORD. A CERTIFICATE WILL BE ISSUED WHEN THE COURSE IS COMPLETED

THE TIME SPENT ON EACH SURVEY MONKEY WILL BE KNOWN TO THE MODERATOR SO IF THE VIDEO IS NOT PLAYED, THE MODERATOR WILL KNOW AND A CERTIFICATE WILL NOT BE ISSUED

IT IS POSSIBLE TO DO THE COURSE WITHOUT DISCLOSING YOUR IDENTITY AND E-MAIL BUT IT WILL NOT BE POSSIBLE TO BE ISSUED WITH A CERTIFCATE FOR OBVIOUS REASONS

THE COURSE IS A BENEFIT OF SERGS MEMBERSHIP AND IS FREE TO SERGS MEMBERS. A FEE OF €150.00 WILL BE CHARGED TO THOSE WHO ARE NOT MEMBERS OF SERGS OR ONE OF THE AFFILIATED SOCIETIES (e.g. BIARGS, Spanish Society). WE HOPE THAT THIS AND OTHER PRODUCTS AVAILABLE TO SERGS MEMBERS WILL ENCOURAGE PEOPLE TO JOIN THE SOCIETY

Module 1 - Introduction

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/6BWJQ7C

10 minutes

When entering your unique number please enter the first two letters of your first name, then the first two letters of your last name, then the first two numbers of the day of your birthday, and then first two numbers of the month of your birthday. Therefore the unique number for Thomas Ind born on the 24th September would be THIN2409. It is important you enter the same code for each module so we know that the module was completed and that we can send you a certificate at the end of the course.

The video in this module explains what the course is about. After you have watched the video please enter your details on the screen so you can be recorded as having viewed the module and subsequently be given a certificate. There are some questions that ask about your level of experience and also test your knowledge of teaching. It does not matter if you get these wrong or right as you have not started the course yet. You will be asked the same questions at the end of the course so we can assess if this has been of educational value.

Please note that we will be asking you for contact details. We need this so we can check your membership to SERGS and issue you with a certificate. If you do not wish to share these details then that is fine but we will not be able to issue you with a certificate for obvious reasons.

Module 2 - Reflection

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/L8HC3H6

25 minutes

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In this video I interview a surgical trainer (Marielle Nobbenhuis), an airline pilot who is a teacher (Captain Mark Hamwee), and my daughter who is at Cambridge University training to be a primary school teacher. These interviews contrast the difference in emphasis on training in different industries.

The survey monkey questionnaire will ask you to reflect on who you teach, What the qualities of a good trainer are, and what training you have received as a surgical trainer.

Module 3 - Trainers Competence

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/NC9XG36

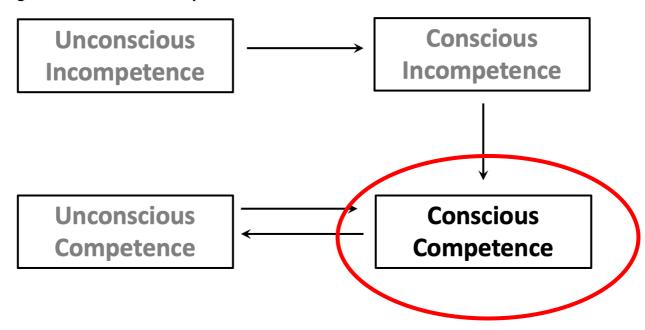
12 minutes

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In this video we examine the different levels of competence to assess where our trainees may be at but also so you can understand the level of competence a trainer should start from. Conscious competence is the place that a trainer should be at. Not just being able to perform a task but also knowing how.

It is important to answer the survey question at the end to be recognised as having done this module and gain your certificate at the end of the course.

Figure 1 Levels of competence



Module 4 - Cognitive Overload

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/BS8MTH5

12 minutes

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It is important to answer the survey question at the end to be recognised as having done this module and gain your certificate at the end of the course.

Cognitive overload

This is a situation where someone is given too much information at once, or too many simultaneous tasks, resulting in not being able to process the information or perform the task.

Take home messages of module

A teacher should not be teaching while a trainer is simultaneously trying to operate. The "stop" command should be used to stop the trainee before an instruction is given

Module 5 - Performance Enhancing Instructions

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/PYPXR6Z

8 minutes

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Levels of instruction

Level 1	No instruction
Level 2	Negative comments
Level 3	Positive comments
Level 4	Didactic instructions
Level 5	Performance enhancing instructions

Where possible, try and use performance enhancing instructions when teaching trainees to operate.

Module 6 – The Training Episode

The training episode consists of three distinct phases

- 1 The Set
- 2 The Dialogue
- 3 The Closure

The Set

The set consists of two parts. The verbal set and the physical set. The verbal set is the discussion between the trainer and trainee before the exercise begins. The physical set consists of all the others aspects that need to be prepared prior to training such as the choice of case, and the environment in which the learning exercise has to take part in.

The dialogue

The dialogue consists of the actual training exercise. The trainer will need to avoid cognitive overload and use performance enhancing instructions. However, the trainer may need to take over in theatre as the primary duty of care is to the patient not the trainee.

The closure

The closure occurs at the end of a training episode and is when the trainee and trainer summarise what has been achieved and what is required in the future. This should include feedback by and to both the trainee and the trainer.

Module 6a - The Verbal Set

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/B7YXKD5

8 minutes

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The verbal set can be summarised by the acronym SEAS

S = Summary (explanation of what is happening in the day)

E = Evaluating Experience (Understanding the level the trainee is at)

A = Aligning agendas

S = Settlement (an agreement between trainer and trainee)

Module 6b - The Physical Set

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/WJBZM6Q

4 minutes

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The physical set is the physical environment in which the training episode occurs. There are some important things to remember regarding the perfect physical set;

- 1 Have an appropriate case
- 2 Ensure there is time
- 3 Make sure there is the correct equipment in theatre
- 4 Ensure there is the correct staff in theatre

Module 6c – The Dialogue

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/WHPPZ5W

6 minutes

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The dialogue should be performed using performance enhancing instructions (module 5) and avoiding cognitive overload (module 4). During surgery on a patient it may be necessary to stop the procedure to avoid cognitive overload and ensure everything is safe. For this you should use the SIX StEPs

- S STOP (Use the stop command)
- I Inquire (Inquire if the trainee understands why they have been stopped)
- X eXplain (eXplain why the trainee has been stopped)
- St Structured training (using performance enhancing instructions)
- E Evaluate understanding (ensure that the trainee has understood)
- Ps Proceed if safe (continue with the surgery if safe to do so)

Module 6d - The Closure

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/WP2J5Q3

10 minutes

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At the end of each learning exercise there should always be a debrief. For this we use the acronym GIFTS

- G Good (what went well)
- I Improvement (what could be improved next time)
- F Follow-up plan (when the next training is and what should be achieved)
- T Trainer's feedback (from the trainee to the trainer)
- S Single take home message

Module 7 - The Difficult Trainee

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/S76YQ37

12 minutes

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When dealing with a difficult trainee there should be three aims;

- 1. Avoid embarrassing or belittling the trainee
- 2. Stop the behaviour as quick as possible
- 3. Keep the trainee engaged

There are a number of traits that might make a student a difficult trainee. Some are listed below. Reflect on each one and decide how you would deal with each situation. There may be some other traits and we ask you to put down any you can think of in the survey money;

- 1. The Chatterbox
- 2. The Introvert
- 3. The Know-it-all
- 4. The Slow learners
- 5. The Cynic
- 6. The Indifferent
- 7. The Complainer
- 8. The Distracted

This is a reflective module so please reflect of how you would deal with each of the scenarios.

Module 8 - Overview of Assessment

Assessments are an inevitable requirement for a surgeon in training. Otherwise, an individual surgeon cannot evidence their achievement having successfully been trained. Assessments can be used as an exam or to help a student evaluate their progression and inform them. The next three modules help you understand the different types of assessment and also the tools used by SERGS for assessment.

Module 8a - Formative Assessment

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/X8DH562

4 minutes

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A formative assessment is when you use assessment tools to help a student progress. It can be part of the closure if required or at any point in a trainee's learning. It is the using of quantitative and qualitive data to help a student improve and achieve a defined goal.

Module 8b - Summative Assessment

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/KY5SLJJ

10 minutes

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A summative assessment is when you use assessment tools is a high stakes pass / fail situation.

Module 8c - Assessment Tools

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/2R2PBLG

7 minutes

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Examples of assessment tools are in appendices A - C

Module 9 - Proficiency Based Progression

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/6HRLYP7

5 minutes

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This module differentiates between proficiency and competency.

Competency

The ability to do something successfully.

Proficiency

The ability to do something to a high degree of skill.

Proficiency Based Progression

- This is the rule that you only move to the second task having achieved proficiency in the first.
- Evidence suggests that a trainee achieves overall proficiency quicker if this model is undertaken
- The tasks involved in a robotic hysterectomy are presented in this module.

Module 10 - SERGS Certification

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/GJDP63D

13 minutes

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This module is about the processes required to gain SERGS certification.

Module 11 - Credentialling

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/73CLH5R

5 minutes

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This module is about the processes involved in the SERGS Credentialling programme.

Module 12 – Learning and Feedback

To start this module enter the below link into your web surfing programme or click on it if reviewing this on your laptop, PC or Mac;

https://www.surveymonkey.co.uk/r/GSKRRF7

15 minutes

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This is the end of the course. We ask you for your name so we can send you a certificate and we ask you some questions again to see If you have good or bad feedback and if you have learnt anything.

We will send you a reflective questionnaire in a year if you wish to respond.

Appendix A – GEARS form

1	2	3	4	5
Constantly overshoots target, wide swings, slow to correct		Some overshooting or missing of target, but quick to correct		Accurately directs instruments in the correct plane to target
Bimanual dexterity				
1	2	3	4	5
Uses only one hand, ignores nondominant hand, poor coordination		Uses both hands, but does not optimize interaction between hands		Expertly uses both hands in a complementary way to provide best exposure
Efficiency				
1	2	3	4	5
Inefficient efforts; many uncertain movements; constantly changing focus or persisting without progress		Slow, but planned movements are reasonably organized		Confident, efficient and safe conduct, maintains focus on task, fluid progression
Force sensitivity				
1	2	3	4	5
Rough moves, tears tissue, injures nearby structures, poor control, frequent suture breakage		Handles tissues reasonably well, minor trauma to adjacent tissue, rare suture breakage		Applies appropriate tension, negligible injury to adjacent structures, no suture breakage
Autonomy				
1	2	3	4	5
Unable to complete entire task, even with verbal guidance		Able to complete task safely with moderate guidance		Able to complete task independently without prompting
Robotic control				
1	2	3	4	5
Consistently does not optimize view, hand		View is sometimes not optimal. Occasionally		Controls camera and hand position optimally

Appendix B – OSATS form

Objective Structured Assessment of Technical Skills (OSATS) (prepared on basis of the OSATS used by the RCOG for laparoscopy)

- What went well?
- What could be improved?

	Performs well/ independently	Needs help	Not proficient
Assessment of procedure			
Correct docking and de-docking			
Maintains correct position of optics			
Clear inspection of structures			
Movements: fluid & atraumatic			
Appropriate use of assistance			
Appropriate use of robotic versatility			
General technical assessment			
Time, motion, forward planning			
Appropriate instrument use			
Technical use of assistants			
Relation with surgical team			
Insight/attitude			
Documentation of procedure			

Appendix C – NOTSS form

Category Situation Awareness	Elements Gathering information Understanding information Projecting and anticipating future state
Decision Making	Considering optionsSelecting and communicating optionImplementing and reviewing decisions
Communication and Teamwork	Exchanging informationEstablishing a shared understandingCo-ordinating team activities
Leadership	Setting and maintaining standardsSupporting othersCoping with pressure

NOTSS System Rating Options

Rating Label	Description
4 – Good	Performance was of a consistently high standard, enhancing patient safety; it could be used as a positive example for others
3 – Acceptable	Performance was of a satisfactory standard but could be improved
2 – Marginal	Performance indicated cause for concern, considerable improvement is needed
1 – Poor	Performance endangered or potentially endangered patient safety, serious remediation is required
N/A - Not Applicable	Skill was not required or relevant in this case