

**International Training Program in Gynecologic Endoscopic Surgery  
(Six-month Course)  
Department of Obstetrics and Gynecology,  
Faculty of Medicine Siriraj Hospital  
Mahidol University**

**1. COURSE TITLE**

**International Training in Gynecologic Endoscopic Surgery**

**2. CERTIFICATION**

**Certificate of Six-month International Training in Gynecologic Endoscopic Surgery**

**3. RESPONSIBLE ORGANIZATION**

Division of Gynecologic Endoscopic Surgery, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University

**4. RATIONALE FOR PROGRAM INITIATION**

In the present century, gynecologic endoscopic surgery has been developed and has progressed successfully with promising results. Therefore, it is universally acceptable among patients and doctors.

The Division of Gynecologic Endoscopic Surgery, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University has been the pioneer in the field of gynecologic endoscopy in Thailand since 2000. We are recognized by national and international training institutions as the authoritative training center with international collaboration in terms of technology transfer, physician training and surgical instrument support. Currently, with our excellent professional qualifications, we are the most competent institution to provide various training programs in the academic arena of gynecologic endoscopic surgery, in collaboration with the prestigious institution of the Thai-German Multidisciplinary Endoscopic Training Center.

The Thai-German Multidisciplinary Endoscopic Training Center has established many short and medium postgraduate training programs, encompassing the basics and the advances in gynecologic endoscopic surgery for domestic gynecologists and nurses as well as overseas doctors. The regular five-day domestic training programs are organized every three months, and the international training programs take place twice a year. Most of the training programs are run by our in-house experts and those from international institutes from Germany, Japan, Taiwan, Australia and the United States of America. Our training programs are highly regarded by Thai and foreign gynecologists. The Thai-German Multidisciplinary Endoscopic Training Center has also established syllabuses for our residency training programs and the one-year fellowship training program for Thai gynecologists. Every program is beneficial and in great demand among Thai and foreign trainees. To meet the needs of international trainees and to establish our center as a leading authority on gynecologist training in South East Asia, it is deemed valid to set up a new fellowship training program for international gynecologists. This international training program is a six-month course, whose objective is to provide knowledge of and practical skills in endoscopic surgery to overseas gynecologists. This international training program will be most valuable to international gynecologists especially those are working in Thailand and neighboring countries.

## 5. OBJECTIVES

The major objectives of this international training program are as follows:

1. Provide knowledge and acquaintance with the instrumentation and endoscopes (Laparoscopes and Hysteroscopes);
2. Provide basic and advanced knowledge of anatomy, physiology and anesthesiology;
3. Provide basic and advanced theories on modern laparoscopic diagnosis and surgery;
4. Provide trainees with skills and great competency in endoscopic diagnosis and surgery (Laparoscopic and Hysteroscopic surgery) under international ethical components;
5. Provide experience in prevention, detection and correction of complications relating to endoscopic surgery;
6. Provide international friendship forces and international links for the present and the future among gynecologists, both domestic and overseas.

## 6. CURRICULUM OF THE FELLOWSHIP TRAINING PROGRAM

The curriculum is set up in accordance with the training program of the International Society of Gynecologic Endoscopists (ISGE) and the American Association of Gynecologic Laparoscopists (AAGL)-Advancing Minimally Invasive Gynecology Worldwide. This curriculum consists of three levels.

### **Level I: To provide basic knowledge of and acquaintance with pelvic anatomy**

#### **A. Pelvic findings and technical limits**

1. Normal anatomy
2. No mass
3. Manipulation of pelvic viscera
4. No retroperitoneal dissection
5. No dissection of vascular tissues

#### **B. Procedures and their indications**

1. Diagnosis
2. Sterilization
  - a) Bipolar
  - b) Clips
  - c) Ring
3. Lysis of avascular adhesions

#### **C. Anatomy**

Abdominal walls  
 Major retroperitoneal vessels  
 Surface and viscera of pelvis  
 Surface and viscera of upper abdominal cavity  
 Nerves of upper and lower extremities

#### **D. Physiology**

Pneumoperitoneum  
 Trendelenburg

#### **E. Biophysics**

Electrosurgery

#### **F. Ancillary instrumentation and technology**

Uterine elevators  
 Scalpel blades

Suture needles  
 Veress needles  
 Cannulas  
 Laparoscopes  
 Operative instruments  
     Probes  
     Graspers  
     Scissors  
     Irrigator-aspirators  
     Bipolar forceps  
     Ring applicators  
     Clip applicators  
 Insufflators  
 Xenon light sources  
 Light cables  
 Video cameras  
 Video monitors  
 Videotape recorders  
 Printers  
 Electrosurgical generators

#### G. Skills

1. Preparation: patients and operating rooms
  - Equipment floor plans
  - Room lighting
  - Stomach decompression
  - Anesthetic inhalants
  - Patient's positioning of legs, arms and buttocks
  - Table height adjustments
  - Draping
  - Examination under anesthesia
  - Antiseptic preparation
  - Tenaculum to cervix
  - Uterine sounding
  - Setting intrauterine manipulators
  - Organizing cables and cords
2. Peritoneal access
  - Umbilical incisions
  - Abdominal wall elevation
  - Veress entry logistics
  - Assessing pneumoperitoneum
  - Cannula entry logistics, primary and secondary
  - Left upper quadrant veress and cannula entry
  - Left lower intercostal veress entry
3. Tissue evaluation, manipulation and dissection
  - Macroergonomics
    - Veress grips
    - Cannula grips
    - Laparoscope grips
    - Video camera grips
    - Probe grips
    - Laparoscopic instrument grips
    - Irrigator-aspirator grips

Ring and clip applicator grips  
Abdominal incision closures

Microergonomics

Mobilization of bowel  
Strategic regional and focused inspection  
Systematic irrigation-aspiration  
Focused grasping and lifting  
Focused manipulation  
Tension-counter tension maneuvers  
Uterine manipulation  
Blunt dissection  
Sharp dissection  
Positioning fallopian tubes  
Physical and thermal application  
Clip applications  
Band applications  
Chromopertubation  
Bipolar electrosurgical coaptive coagulation

**H. Troubleshooting and creativity**

1. Extremes of body habitus
2. Prior laparotomy
3. Uterine anteflexion and retroflexion
4. Large or malformed uterus
5. Cervical stenosis
6. Preperitoneal insufflation
7. Lens fogging
8. Adhesive diseases
9. Carbonization and tissue sticking
10. Significant tubo-ovarian adhesions

**I. Complications: recognition and management**

Bleeding at tenaculum sites  
Uterine perforation and bleeding  
Bleeding at cannula sites, superficial and deep  
Traumatic injury to retroperitoneal vessels  
Traumatic injury to bowel  
Traumatic injury to bladder  
Hemorrhage at traction and incision sites  
Thermal injury to viscera  
Sterilization failure

**J. Medico-legal considerations**

Informed consent doctrine  
Pre-operative counseling  
Documentation  
Post-operative care

**Level II: To improve skills in simple surgical techniques such as ovarian cystectomy**

**A. Level IIA**

- Pelvic findings and technical limits
- a) Vascular adhesions
  - b) Superficial peritoneal diseases
  - c) No tissue mass
  - d) Sharp dissection in pelvis

- e) No retroperitoneal dissection
- f) No significant tissue removal

Procedures and their indications

Diagnostic and focal biopsy

Lysis of moderate adhesions

Biopsy and coagulation of superficial endometriosis

#### **B. Level IIB**

Pelvic findings and technical limits

Small mobile masses

Sharp dissection and excision in pelvis

Simple tissue removal

No retroperitoneal dissection

Procedures and their indications

- a) Tubal sterilization: segmental resection, modified Pomeroy
- b) Salpingectomy
- c) Linear salpingostomy

#### **C. Level IIC**

Pelvic findings and technical limits

a) Larger mobile masses

b) Greater tissue removal

Procedures and their indications

- a) Ovarian cystectomy
- b) Pedunculated myomectomy
- c) Posterior culdotomy

#### **D. Didactic content for levels IIA, IIB, and IIC**

##### 1. Anatomy

- a) Pelvic brim
- b) Pelvic sidewall
- c) Course of pelvic ureter
- d) Base of broad ligament
- e) Upper paravaginal anatomy
- f) Rectovaginal reflection

##### 2. Ancillary instrumentation

- a) Injection-aspiration needles
- b) Monopolar operative instruments and electrodes
  - (1) Graspers
  - (2) Scissors
  - (3) Blades
  - (4) Needle tips
- c) Toothed tissue graspers
- d) Endoscopic sacs
- e) Endoloops
- f) Fascial closure devices
- g) Heaney needle holders
- h) Small soft tissue retractors

##### 3. Skills

- a) Bowel preparation
- b) Choosing and attaining accessory cannula sites
- c) Tissue evaluation, manipulation and dissection
  - (1) Strategic inspection for signs of malignancy
  - (2) Systematic peritoneal washings
  - (3) Systematic adhesiolysis
  - (4) Hydro-injection of retroperitoneum

- (5) Hydro-dissection
  - (6) Mechanical incision and excision
  - (7) Monopolar techniques with a variety of electrodes
    - (a) Desiccation
    - (b) Coagulation
    - (c) Electro-section
    - (d) Vaporization
    - (e) Fulguration
  - (8) Linear and curvilinear monopolar electro-section
  - (9) Peritoneal relaxing incisions
  - (10) Bipolar electrosurgical techniques
    - (a) Coaptive desiccation
    - (b) Touch coagulation
  - (11) Hydro dissection for removal of intraluminal products of conception
  - (12) Endoloop as tissue ligature
  - (13) Mass reduction and extraction of tubal segment
  - (14) Ovarian fixation
  - (15) Ovarian cyst aspiration
  - (16) Diagnostic ovarian cystoscopy
  - (17) Tension-counter tension synamism of tissue peeling
  - (18) Bagging and extracting specimens
  - (19) Total directed peritoneal lavage
  - (20) Prophylactic hemostasis with vasopressin
  - (21) Anatomic recognition for posterior culdotomy
  - (22) Reshaping techniques for myoma removal
  - (23) Transporting and affixing adhesion barriers
  - (24) Widening abdominal walls, soft tissues and fascia
  - (25) Direct abdominal fascial closure
  - (26) Transvaginal suturing of vagina fornix
- d) Troubleshooting and creativity
- No abdominal wall vessel landmarks
  - Smoke evacuation
  - Clot lysis and removal
  - Bleeding epigastric vessels
  - Cyst aspiration, size reduction
  - Preventing leakage on cyst aspiration
  - Dense dermoid
  - Bleeding at ovarian hilum
  - The stuck specimen
  - Adhesion prevention
  - Bagging large tissue masses
  - Removing large tissue masses
  - Calcified myoma
  - Maintaining pneumoperitoneum on vaginal incision
  - Mass reshaping and morcellation
  - Endometriosis near vagina, bladder bowel and ureter
  - Significantly dissected ovarian fossa
  - Peritoneal trophoblastic implantation
4. Complications: recognition and management
- Injury to superficial or inferior epigastric vessels
  - Abdominal wall vessel ligation and coagulation

Thermal injury to bladder or bowel  
 Active arterial hemorrhage  
 Lost vessels  
 Larger cannula sites  
 Direct fascial closure  
 Spillage of ovarian cyst contents: dermoid and mucinous  
 Myometrial bleeding  
 Pitressin-induced cardiovascular phenomena

**Level III: To practice for advanced laparoscopic surgery such as salpingo-oophorectomy, hysterectomy, myomectomy and lymphadenectomy**

- A. Pelvic findings and technical limits**
1. No distortion of retroperitoneum
  2. Dense vascular adhesions
  3. Advanced adhesiolysis
  4. Dissection and mobilization of pelvic ureter
  5. Securing large vascular pedicles
  6. Dissection and mobilization of retroperitoneum
  7. Laparoscopic suturing
- B. Procedures and their indications**
1. Lysis of dense adhesions
  2. Excision of peritoneal endometriosis
  3. Pelvic sidewall dissection
  4. Oophorectomy
  5. LAVH down to uterine vessels
  6. Supracervical hysterectomy
  7. Uterine morcellation
  8. LUNA
  9. Repair of incidental cystotomy
- C. Anatomy**
1. Three surgical layers of the pelvic sidewall
  2. Avascular retroperitoneal spaces
- D. Ancillary instrumentation**
1. Knot pushers
  2. Needle holders
  3. Suture needles and materials
- E. Skills: Tissue manipulation and dissection**
1. Restoration of tubo-ovarian anatomy
  2. Entering and mobilizing retroperitoneum
  3. Identification and isolation of pelvic ureters
  4. Tubo-uterine dissection and incision
  5. Utero-ovarian dissection and incision
  6. Retro-ovarian dissection
  7. Skeletonization of ovarian vessels
  8. Free suture-passing techniques
  9. Extracorporeal tying
  10. Intracorporeal tying
  11. Bipolar coaptive desiccation of ovarian vessels
  12. Broad ligament dissection
  13. Skeletonization of lower uterine segment
  14. Mobilization of vesicouterine plane
  15. Uterine artery skeletonization
  16. Coaptive desiccation of lower uterine segment vessels

17. Skeletonization and incision of uterosacral ligament
18. Anterior and posterior culdotomies
- F. Troubleshooting and creativity
  - Identification and surgical isolation of ureters
  - Retro-ovarian fixation
  - Dense periovarian adhesions
  - Posterior and low lateral myoma
  - Mobilizing large uterus
  - Segmentally accessing large uterus
- G. Complications: recognition and management
  1. Thermal and mechanical injury to ureters
  2. Retroperitoneal bleeding
  3. Incidental cystotomy
  4. Retracted or lost pelvic vessels
  5. Have the appropriate competency level of knowledge and skills for correct laparoscopic complications

### **7. SPHERE OF TRAINING PROCESS AND EXPERIENCE**

Every trainee is required to study and work under close supervision of the responsible supervisors as a period of attended program. The international program consists of didactic lectures given in English and laboratory training (dry lab and wet lab) and requires trainees to work as an assistant or surgeon in the operating theatre under supervision of professors.

The activities for the training program include:

1. Medical conferences, including national and international teleconferences, didactic lectures, journal club, case demonstration, case study, etc.
2. Taking care of gynecologic patients in the out-patient department (including pre and post operative care) and in-patient gynecologic ward under close supervision.
3. Working as an assistant in the operating theatre on endoscopic surgeries.
4. Performing simple endoscopic surgical procedures under close supervision of professors in the field of Endoscopic surgery according to the program attended
  - The 3-month training program: diagnostic laparoscopy, diagnostic hysteroscopy, and minor laparoscopic surgery such as salpingectomy and cystectomy
  - The 6-month training program: Laparoscopic salpingo-oophorectomy, laparoscopic hysterectomy on uncomplicated cases
  - The 1- year training program: Laparoscopic surgery on difficult cases such as laparoscopic hysterectomy for a large pelvic mass or severe endometriosis.
5. Learning how to be a good trainer in the field of endoscopic surgery.



## **8. PROGRAM EVALUATION TO CERTIFY THE QUALIFICATIONS OF ENDOSCOPIC SURGEONS**

1. Formative evaluation during the training process for every program
2. Summative evaluation by final written examination, interview and research project for the 1-year training program.
3. A trainee who fulfills the above requirements is qualified for Certificate of Proficiency in Gynecologic Endoscopy according to the attended program.

## **9. BASIC REQUIREMENTS FOR APPLICANTS**

The trainee must have at least one of the following compulsory qualifications.

1. Licentiate doctor of medicine from a qualified institute
2. Qualified for Board of Obstetrics and Gynecology from a standard institute
3. Three-year experience in gynecologic surgery

## **10. TRAINING PERIOD**

The course starts on 1<sup>st</sup> of June each year.

## **11. PROGRAM OPENING AND POSITION**

The opening of the program is according to the decision of the Faculty of Medicine Siriraj Hospital, Mahidol University with maximally two international positions accepted each year.

## **12. ORGANIZING COMMITTEE**

<b>Chairman</b>	Assoc. Professor Dr. Amphan Chalermchockcharoenkit
<b>Committee</b>	Professor Dr. Pongsakdi Chaisilwattana Assist. Professor Dr. Suwanit Therasakvichya Assoc. Professor Dr. Rounsin Choavaratana Assos. Professor Dr. Surasak Angsuwathana Assoc. Professor Dr. Suphakde Julavijitphong Assist. Professor Dr. Pavit Sutthritpongsa Lecturer. Dr. Naruenart Lomarat Assos. Professor Dr. Rosarin Ratanalekha
<b>Secretary</b>	Assoc. Professor Dr. Korakot Sirimai
<b>Advisors</b>	Professor Dr. Chanchai Vantanasiri Assist. Professor Dr. Somsak Laiwejpithaya Assoc. Professor Dr. Weerasak Wongtiraporn Professor Dr. Anuvat Roongpisuthipong

## **13. TRAINING STAFF**

- 1) Professor Dr. Pongsakdi Chaisilwattana
- 2) Professor Dr. Dr. h.c. H.R. Tinneberg and colleagues
- 3) Assoc. Professor Dr. Amphan Chalermchockcharoenkit
- 4) Assoc. Professor Dr. Korakot Sirimai
- 5) Assist. Professor Dr. Kovit Pimolpan
- 6) Assoc. Professor Dr. Rounsin Choavaratana
- 7) Assoc. Professor Dr. Surasak Angsuwathana
- 8) Assoc. Professor Dr. Suphakde Julavijitphong
- 9) Assist. Professor Dr. Suwanit Therasakvichya

- 10) Assoc. Professor Dr. Manee Rattanachaiyanont
- 11) Assist. Professor Dr. Pavit Sutchritpongsa
- 12) Assist. Professor Dr. Pitak Laokirkkiat
- 13) Assist. Professor Dr. Pichai Leerasiri
- 14) Assist. Professor Dr. Perapong Inthasorn
- 15) Assoc. Professor Dr. Prasong Tanmahasamut
- 16) Lecturer Dr. Pattaya Hengrasmee
- 17) Professor Dr. Suchai Soontrapa (Urologist)
- 18) Lecturer. Dr. Naruenart Lomarat (Anesthesiologist)
- 19) Assoc. Professor Dr. Rosarin Ratanalekha (Anatomist)

#### 14. BASIC DATA OF THE QUALIFIED ENDOSCOPIC TRAINING CENTER

<b>Special requirements for training centers in gynecologic endoscopic surgery.</b>
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	Yes	No
<b>1. Recognized specialists</b>	8 Persons	
<b>2. Clinical workload (Jan-Dec, 2011)</b>		
Number of patients in Gynecologic Oncology unit	4,572	visits
Number of patients in Endocrine unit		
Menopause clinic	4,362	visits
Endocrine clinic	4,361	visits
Number of patients in Family Planning unit		
Counseling service	4,242	visits
Family planning users	7,463	visits
Number of patients in Infertility unit		
Infertility clinic	11,558	visits
Number of patients in laparoscope / hysteroscope surgery per year	857 97	cases cases
<b>3. Appropriate clinical facilities for investigating relevant endocrine and infertility disorders</b>	[ / ]	[ ]
<b>4. Facility for training in laparoscopic tubal microsurgery</b>		
Number of patients for laparoscopic tubal microsurgery	28	cases
<b>5. Collaboration with consultants</b>	[ / ]	[ ]
<b>6. Adequate gynecological pathology service</b>	[ / ]	[ ]
<b>7. Research program in the subspecialty field</b>	[ / ]	[ ]

### 15. TRAINEE PERFORMANCE AND TRAINING SCHEDULE

1. The trainee has to be in charge of and responsible for the gynecologic out-patient clinic once a week.
2. The trainee has to work either as an assistant or a surgeon in the operating theatre at least 15 hours a week.
3. The trainee has to take good care of the patients in the gynecologic wards with full responsibility.
4. The trainee has to conduct and attend academic conferences in the journal club and the departmental conferences at least two hours a week.
5. The trainee has to serve as an advisor for the residents, medical students, nurses and paramedical personnel.

#### TRAINING PROGRAM SCHEDULE

Day/Time	7.00-8.00	8.00-9.00	9.00-12.00	13.00-16.00	16.00-17.00
<b>Monday</b>	Ward round	Departmental conference or Grand round	OR		Ward round
<b>Tuesday</b>	Ward round	Lecture	OR		Ward round
<b>Wednesday</b>	Ward round	Case conference	OPD	TG-MET-C academic meeting or laboratory practice	Ward round
<b>Thursday</b>	Ward round	Lecture	OR	OR and/or Journal club	Ward round
<b>Friday</b>	Ward round	Departmental or interdepartmental conference	OR	Self-study and laboratory practice	Ward round

**TOPICS OF LECTURES**

<b>No.</b>	<b>Date</b>	<b>Topic</b>	<b>Lectures</b>
1.		History of endoscopic surgery in gynecology.	Prof. Dr. Pongsakdi Chaisilwattana
2.		Overview of endoscopy.	Prof. Dr. Pongsakdi Chaisilwattana
3.		Anatomy of female pelvis via endoscopy.	Asst. Prof. Dr. Rosarin Ratanalekha
4.		Indications, contraindications and complications of endoscopic surgery in gynecology.	Asst. Prof. Dr. Korakot Sirimai
5.		Equipment, instrumentation and maintenance.	Assoc. Prof. Dr. Amphan Chalermchockcharoenkit
6.		Anesthesia in minimally invasive surgery.	Dr. Naruenart Lomarat
7.		Abdominal entry.	Prof. Dr. Pongsakdi Chaisilwattana
8.		Energy sources utilization in Endoscopic surgery.	Assoc. Prof. Dr. Amphan Chalermchockcharoenkit
9.		Techniques of diagnostic and laparoscopic surgery.	Prof. Dr. Pongsakdi Chaisilwattana
10.		Techniques of diagnostic and hysteroscopic surgery.	Assist. Prof. Dr. Surasak Angsuwattana
11.		Management of early and late complications.	Asst. Prof. Dr. Korakot Sirimai
12.		Gasless laparoscopic surgery	Asst. Prof. Dr. Korakot Sirimai
13.		Laparoscopic Gynecologic Oncosurgery.	Assoc. Prof. Dr. Amphan Chalermchockcharoenkit
14.		Female Infertility.	Assoc. Prof. Dr. Suphakde Julavijitphong
15.		Urologic gynecology	Prof. Dr. Suchai Soontrapa
16.		Pelvic floor surgery.	Assist. Prof. Dr. Pavit Sutthritpongsa

## 16. CERTIFICATION

All trainees who have completed the training process according to the curriculum and have passed the examination are qualified to receive the Certificate of International Training in Gynecologic Endoscopic Surgery from the Faculty of Medicine, Siriraj Hospital, Mahidol University, Thailand.

## 17. COURSE COORDINATORS

- Assoc.Professor Dr.Amphan Chalermchockcharoenkit  
Chairman, Thai – German Multidisciplinary Endoscopic Training Center  
Tel. 02 - 419-7000 ext 4744-5
- Ms.Janjira Boorisut  
International Relations, Faculty of Medicine Siriraj Hospital  
Tel. 02 – 419 – 7000 ext.9465-6 ext 104

## 18. TUITION, FEES AND OTHER EXPENSES FOR THE INTERNATIONAL TRAINING PROGRAM (ADDITIONAL SIX MONTH)

1. Instructor Fee			
- Instructor Fee (1,500 Baht/hr x 16 hrs)		24,000.00	Baht
- Instructor Fee (1,000 Baht/hrs,3hrs/day)16 days		48,000.00	Baht
- Instructor fee (observe 1,500 baht x 30 days)		45,000.00	Baht
2. Instruments			
2.1 Depreciation value of the training instrument		18,000.00	Baht
2.2 Expense for disposable raw specimen for laboratory		20,000.00	Baht
2.3 Porcine workshop		18,000.00	Baht
2.4 Pelvic Training model		16,000.00	Baht
3. Expense for Welcome Banquets (30x 150/person)		4,500.00	Baht
4. Expense for Culture tour			
5.1 Admission charge		1,500.00	Baht
5.2 Travelling expense		2,000.00	Baht
5. Traveling Expense from Airport (arrival and departure trip)		3,000.00	Baht
6. Expense for Coordinator			
7.1 Department/section		2,000.00	Baht
7.2 International Relation		2,000.00	Baht
7. Compensation for Siriraj education patients		40,000.00	Baht
8. Other non itemized supplies		32,500.00	Baht
	Total 1 - 8	276,500.00	Baht
9. Faculty Fee		23,000.00	Baht
	Total 1 - 9	<b>276,500.00</b>	<b>Baht</b>
<b>Total expense for addition six months</b>		<b>299,500.00</b>	<b>Baht</b>
		<b>(USD 9,983 \$30 = 1 USD)</b>	