Virtual Training.

Proven Results.
Better surgical training means safer, more capable surgeons. With clinically proven impact on OR performance, fully customizable curriculum and the industry’s highest quality system and service, LapSim is the unmatched leader in virtual reality laparoscopic training.

TARGETED, EFFICIENT TRAINING
The only VR system with published validation of skill transference to the OR, LapSim is also the only VR system that offers a fully customizable curriculum, allowing for thousands of unique challenges and increasing levels of difficulty. LapSim also offers the opportunity to hone in on the critical procedural elements most in need of practice, making the most of valuable training time. The system’s unique assessment and performance metrics provide the opportunity for real-time on-screen cues and off-site review.

QUALITY & SERVICE
With LapSim, you’re getting the best technology possible, plus the industry’s only true partnership. From day one through the life of the simulator, our simulation specialists will assist in everything from set up to curriculum customization to research.

ONGOING INNOVATION
Surgical Science is committed to keeping LapSim on the leading edge. We are the only company to guarantee annual updates with significant module additions and improvements. These updates are at no additional cost through our industry leading warranty program.

LAPSIM 2015 FEATURES
LapSim is more powerful and easier to use than ever. Our latest annual update features rich upgrades to curriculum design, metrics, instruments and system functionality, more than 50 new courses and so much more.

CORE UPDATES:
▪ Easier Course Administration — Group courses in your own curricula, set the order in which they are presented to trainees, and customize training within courses.
▪ Enhanced Metrics Application — Easily and quickly implement default metrics across all exercises.
▪ New Instruments — Atraumatic graspers, Maryland graspers and other new instruments are now available in several existing exercises.
▪ Improved Realism — Many new tasks and procedures now feature improved collisions and fewer fly-throughs.
▪ Additional Courses — Access more than 50 new courses in the LapSim default library, all with PGY1-5 classification.

www.SurgicalScience.com
CUSTOMIZED COURSEWORK. DYNAMIC ASSESSMENT.

High-performance laparoscopic skills come only with repetition. With LapSim, techniques and complete procedures can be practiced again and again at increasing levels of difficulty, with thousands of new challenges, scenarios and complications to make each experience unique. Each exercise is digitally recorded with detailed metrics, statistics and video debriefing, providing both immediate and long-term skill development feedback.

THE LAPSIM SYSTEM

The LapSim System includes a Haptic or Non-Haptic hardware platform with LapCam, a separate laparoscope; Basic Skills, Task Training and Camera Anatomy Training software modules; all necessary computer and monitor hardware; and a height-adjustable rolling SimStation to house the system.

LAPSIM CORE SOFTWARE MODULES

BASIC SKILLS


TASK TRAINING

Inspired by guidelines established by SAGES and ideal for FLS skills training, Task Training exercises include Peg Transfer, Pattern Cutting, Ligating Loop and Intracorporeal Suturing.

CAMERA ANATOMY TRAINING

Camera Anatomy Training modules focus on teaching camera handling with straight and angled optics within a virtual anatomy.
LapSim’s suite of validated, fully customizable procedure modules provides a complete training solution for surgeons across multiple disciplines. With clearly defined learning objectives, procedural deconstruction capabilities and endless variations and challenges, LapSim’s library of software modules provides surgeons with unparalleled access to skill practice essential to building surgical proficiency.

ADDITIONAL LAPSIM SOFTWARE MODULES

**CHOLECYSTECTOMY**

Featuring SimPraxis™, an integrated cognitive skills trainer, this module simulates each procedural step, from clipping the cystic duct to removing the gall bladder.

**APPENDECTOMY**

Featuring CaseNetwork®, an integrated cognitive skills trainer for the diagnosis and management, this module simulates various approaches to appendectomy including loop technique, single and dual stapling techniques and optional stapling techniques.

**BARIATRICS**

Features procedural deconstruction. Includes simulations of four training tasks: lap-band suturing, jejunal suturing, inspect and measure the bowel.

**NEPHRECTOMY**

Features procedural deconstruction. Simulates three training tasks, including: camera management, kidney dissection, and kidney clipping.

**GYNECOLOGY**

Includes cutting edge simulations of four procedures: Tubal occlusion, Salpingectomy, Salpingostomy and Myoma suturing.

**HYSTERECTOMY** - Featuring SimPraxis™, an integrated cognitive skills trainer, this module includes right and left uterine artery dissection, vaginal cuff opening, and suturing of the cuff after removal of the uterus.

**SUTURING & ANASTOMOSIS**

Features a progressively complex, stepwise approach to suturing and knot tying techniques.

**SIMULATION INDUSTRY FIRST! VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS) LOBECTOMY**

Simulates all key steps of the removal of the upper right lung lobe using a three-port anterior approach.

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Virtual Training. Proven Results.

Proven More Cost-effective than Conventional Training.

According to the Annals of Surgery, “training on VR simulators [is] more cost-effective than conventional residency training ... for residency programs with more than 10 trainees.”

*Annals of Surgery, Volume 255, Number 5, May 2012

LapSim Return on Investment = 3.2 years*

Updates & Support: Keeping You on the Cutting Edge.

A big part of delivering on our commitment to advancing the field of medical simulation training is making sure our software is constantly evolving, improving and available to our users without any hassle.

That’s why we take full responsibility for keeping LapSim up-to-date with the most current software version available. Subscribers to our Update & Support agreement receive substantial upgrades at least once a year, including improved software and new training simulations.

The illustration below shows some of the updates released in the last five years.

- New Basic Skills exercise: Catheter Insertion
- Improved Appendectomy module
- New instrument choices in Bowel Handling
- Additional video recording storage and save options
- Directly import students from Excel files
- New LapSim Haptic System
- More realistic features and images
- Additional scope angle option of 45°
- Better dynamics in all Gynecology exercises
- New features in Admin login
- New: Bariatrics module now s Jejunal Suturing, Inspect Bowel, and Measure Bowel in addition to Lap-band Suturing
- New: Nephrectomy module now includes 2 new exercises: Kidney Dissection and Kidney Combined, in addition to Kidney Clipping.
- New: Survey function allows instructor ability to create and insert customizable questionnaire to any course for students/trainees.
- Improved: Results page now shows a clearer view of results, and now allows student/trainee to add comments with the results.
- Easier Course administration: Group courses in your own curricula, set the order in which they are presented to trainees, and customize training within courses.
- New: Easily & Quickly implement default metrics across all exercises.
- New Instruments: Atraumatic graspers, Maryland graspers and other new instruments are now available in several existing exercises.
- Additional Courses: Access more than 50 new courses in the LapSim default library, all with PGY1-5 classification.
Proven Skill Transference from VR to OR.

LapSim is the only virtual training system proven to improve OR performance. In fact, multiple randomized published studies have demonstrated that the skills practiced during both short-term and long-term training with LapSim are directly transferable to the operating room.

**VR TRAINING LEADS TO FEWER ERRORS AND OPERATING TIMES**

**CLINICAL STUDY:** “Effect of virtual reality training on laparoscopic surgery: randomized controlled trial”
Published in BMJ 2009; 338:b1802 (e-publication, May 14, 2009)

**RESULTS:** After 6 hours of virtual reality-based LapSim training, the performance level of novices increased to that of a laparoscopist with 20-50 case experiences and halved the time needed to complete the procedure.

**VR WARM-UP IMPROVES OR PERFORMANCE**

**CLINICAL STUDY:** “Warm-up in a virtual reality environment improves performance in the operating room”
Published in Annals of Surgery, June 2010

**RESULTS:** Brief (15 minute), pre-surgical warm-up on LapSim significantly improved the performance of surgeons conducting a laparoscopic cholecystectomy in the OR, leading to improved procedural outcomes, improved patient safety and better utilization of OR resources.

Surgical Science is the unmatched global leader in medical simulation training, offering the industry’s highest quality and most innovative virtual reality surgical education platforms. Our mission is to provide validated, targeted and efficient training in the most true-to-patient scenarios possible.