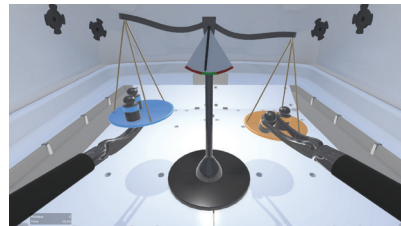
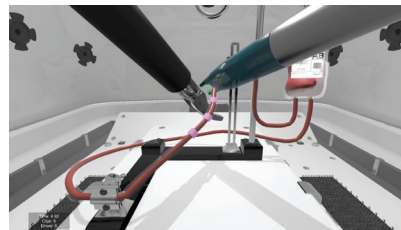


SIMENDO

certifying skills



Simendo
laparoscopy

product
information



Simendo laparoscopy Pro3

Simendo laparoscopy

The Simendo laparoscopy simulator is designed for all laparoscopic specialties, such as general surgery, gynaecology and urology. The simulator enables the user to train laparoscopic skills up to a high level and provides certification programs for novice and intermediate skills.

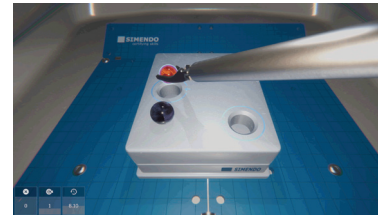
The laparoscopy trainer is connected to our online scoring platform for certification and global competition in the laparoscopy Skills Arena.

- ✓ Plug & play via USB.
- ✓ High precision.
- ✓ Including baseplate for fixed instrument positions.
- ✓ Portable.
- ✓ Can be combined with the Simendo camera for team training.

Novice

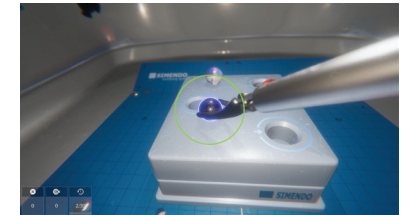
The novice curriculum is designed for trainees with none or little laparoscopic experience. The trainee will obtain the first basic laparoscopic skills step-by-step. In this curriculum the trainee will work in a friendly training environment that fully focusses on instrument handling.

Exercise overview



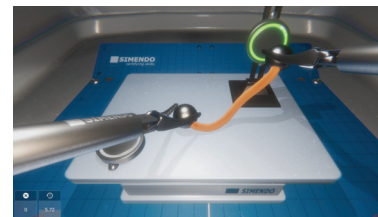
Pick up & drop

Learn the first motorial skills by picking up the marbles and dropping them in the holes.



Pick up & navigate

Pick up the marbles and drop them in the holes while following the instrument with a scope.



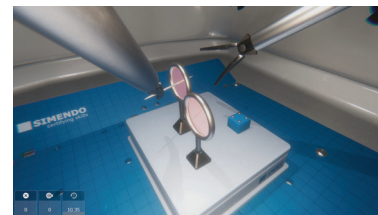
Stretch

Work bimanually by grabbing the iron spheres and placing them on the magnets.



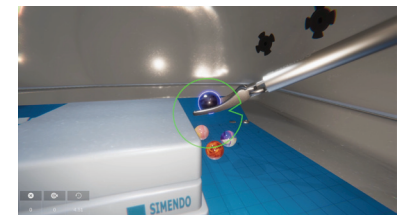
Stretch with misorientation

Experience the importance of camera positioning. Grab the spheres and place them on the magnets while the camera is placed on the left side of the box.



Ring & needle

Navigate the needle through the rings in a straight line by rotating and retracting the instrument at the same time.



30 Degrees scope

Grab and place the marbles on the platform with a grasper while navigating, and experiencing the difficulties of handling, a 30 degrees scope.

Intermediate

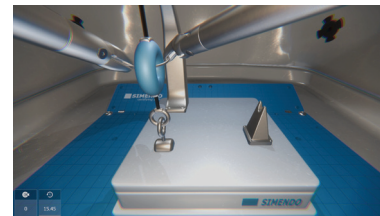
This curriculum is a follow up of the novice curriculum. It is designed for starting laparoscopic surgeons and for those who finished the novice curriculum. The trainee will obtain the most important skills to perform a laparoscopic operation. All exercises are simulating skills that are commonly performed during an operation. After finishing this exercise the trainee is ready to assist a general laparoscopic operation under supervision of an expert, or train on a cadaver or pig.

Exercise overview



Slide & drop

Push away the box sliders to create work space and place the marbles in the hidden spaces underneath.



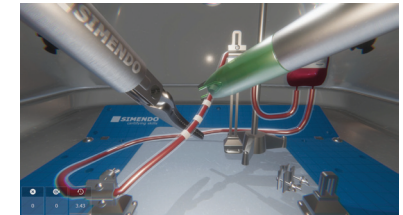
Ring & needle

Learn how to manipulate, position and rotate a curved needle. Also learn how to rotate the wrist needed for stitching to avoid collateral damage.



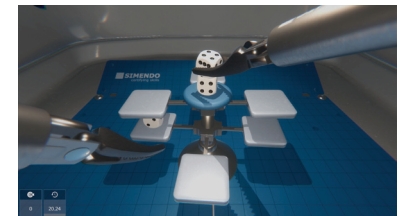
Single knot

Learn the basic principles of tying a single knot. Try to minimise vertical movement of the beam by closing the knot as horizontal as possible.



Clip a vessel

Safely clip a vessel on four different locations. Both sides of the clip must be visible before clipping to make sure that the vessel is fully closed.



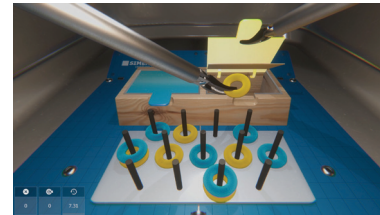
Carousel

Rotate the carousel to freely grab the dice and stack them on top of the plateau. This requires precision and a high level of bimanual dexterity.

Bimanual fundamentals

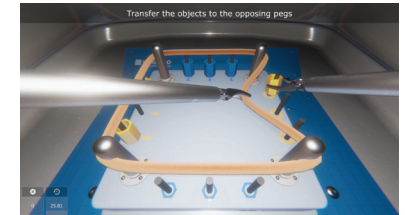
This curriculum is essential to improve the bimanual fundamental skills up to a high level. The trainee will be challenged with various difficult laparoscopic techniques, interact with both instruments and work safely at the same time. The trainee will learn to work precise, with minimal movement for efficient and safe surgery. Another important learning factor in this curriculum is manipulating the orientation of objects and to place them correctly. After finishing this curriculum the trainee has become highly skilled in handling laparoscopic instruments.

Exercise overview



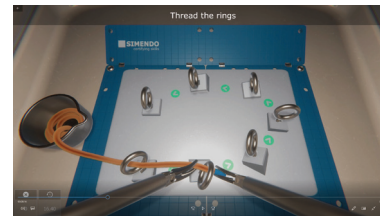
Sort the rings

Place the donuts in the right container.



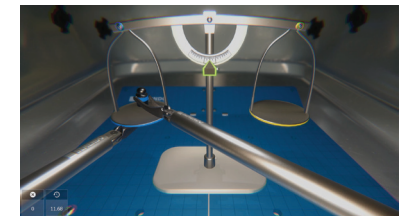
Stretch & transfer

Place the tube around the pillars at the corners. Now stretch the tube to create work space and transfer the cylinders.



Tube & rings

Maneuver the tube through the rings in the right direction.



Balance

Keep the scale balanced while placing weights on each side. When placing a new weight support the other side of the scale with an instrument to keep the scale balanced.



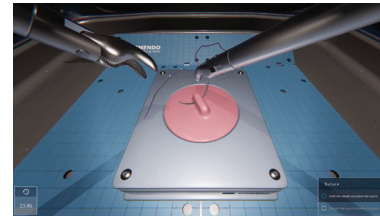
Puzzle

Place the puzzle pieces in the right spot by manipulating and rotating the piece with both instruments.

Suturing & knot tying

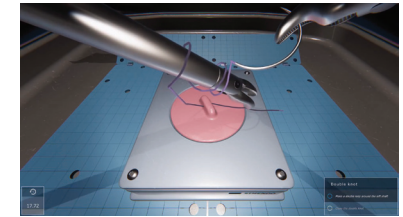
Text

Exercise overview



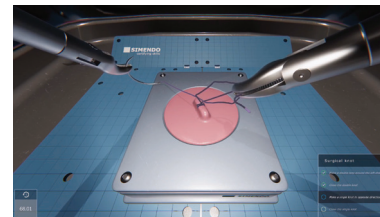
Suture

Prepare a suture for tying a knot.



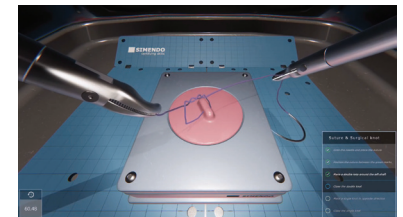
Double knot

Tie an intracorporeal double overhand knot.



Surgical knot

Tie an intracorporeal surgical knot, which is a double followed by a single overhand knot.



Suture & surgical knot

Place a suture followed by a surgical knot.

MySimendo

MySimendo is the online platform that comes with the simulator. This platform manages all data that has been obtained through the Simendo simulator. This platform was the first online platform for surgical simulators and is still considered as the most sophisticated and user-friendly platform that is currently available.

With MySimendo.com scores and certificates are safely stored and always accessible for users. The Simendo makes use of several predefined and scientifically validated curricula that includes nominal scores as a reference for user scores. During training there is no human intervention that can influence the scores accept the user itself. This advanced computer model makes the scoring 100% objective and there is no need for supervisors to check whether the trainee performed well.

MySimendo gives you the full benefits of simulation and is widely accepted, it handles over 15.000 scores every month!

- ✔ Most advanced and user friendly online scoring platform for medical simulators.
- ✔ Online profiles so trainees can resume their training on any Simendo worldwide.
- ✔ Safely stores trainee data in a protected environment.
- ✔ Sends out certificates to users and supervisors.
- ✔ Notifies the supervisor after a trainee has passed the exam.
- ✔ Certification expiry option for repeated training.
- ✔ Supports online competing through the simulation software throughout the year.
- ✔ Create hospital groups for regions.

Publications

If you decide to mandate the training it is essential that there is a scientifically proven foundation. Therefore Simendo BV maintains a close relationship with various academic centres and universities. This close relationship does not only lead to new products, but also new publications and validation articles on which the certificate scores are based.

More references to articles and publications are available on our website at <http://www.simendo.eu/>

Barnes J., Burns J., Nesbitt C., Hawkins H., Horgan A. (2015) Home virtual reality simulation training: the effect on trainee ability and confidence with laparoscopic surgery. *Journal of Surgical Simulation*, 2, 53–59.

Verdaasdonk, E.G., Dankelman, J., Lange, J.F., & Stassen, L.P. (2008) Transfer validity of laparoscopic knot-tying training on a VR simulator to a realistic environment: A randomized controlled trial. *Surgical Endoscopy*, 22(7), 1636-1642.

Article available at:
<http://www.ncbi.nlm.nih.gov/pubmed/18027030>

Schreuder, H.W., van Hove, D., Janse, J.A., Verheijen, R.H., Stassen, L.P., & Dankelman, J. (2011). An 'Intermediate Curriculum' for Advanced Laparoscopic Skills Training using Virtual Reality Simulation.

Article available at:
<http://www.ncbi.nlm.nih.gov/pubmed/21783431>

Contact

Feel free to contact us if you would like purchase information about the Simendo laparoscopy trainer or one of our other products.

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