CAELapVR
User's Guide
END USER LICENSE AGREEMENT FOR CAE PRODUCTS

CAREFULLY READ THE FOLLOWING LICENSE. YOU ACCEPT AND AGREE TO BE BOUND BY THIS END USER LICENSE AGREEMENT BY CLICKING THE BUTTON LABELED "ACCEPT" THAT IS DISPLAYED. IF YOU DO NOT AGREE TO THIS END USER LICENSE AGREEMENT, CLICK THE BUTTON LABELED "DECLINE" AND THE SOFTWARE ACCESS WILL BE PROHIBITED.

The software you are about to access is provided to you pursuant to the purchase of the Product by the legal entity which employs you, or which you represent (the “licensee” or “You”), from CAE. This purchase of the Product is subject to CAE’s Healthcare Education Products General Terms and Conditions (the “HEPGTC”) and this End-User License agreement (“Licensee”). The HEPGTC can be found at

1. Interpretations and Definitions

Whenever used in this License, the following terms shall have the meaning set out below:

“Authorized Users” shall mean any person authorized to access the Produce, which shall include the Licensee's employees, agents, representatives, medical staff and students.

“Confidential Information” means any and all scientific and technical information which is in the possession of, or belonging to, CAE and relating to the Product, including without limitation, all Data, Software, trade secrets, know-how, processes, methodologies, samples, components, analyses, compilations, guides and other information or documents prepared by CAE, its subsidiaries and affiliates and/or their officers, servants, agents, representatives, employees or advisers which contain or are otherwise generated from or reflect any CAE proprietary information, whether or not covered by intellectual property rights or explicitly designated as confidential or proprietary, which is disclosed by any means in written, oral, electronic, or any other form.

“Data” means any documentation or other information provided to Licensee in relation with the Product.

“Product” means any equipment, components, parts, and materials purchased by the Licensee.

“Purpose” means the use of the Software and the Data solely for the operation and maintenance of the Product, and the use of the Product solely as an educational tool.

“Software” means the software, in object code only, embedded in or bundled with the Product or required to operate the Product.

“Work” means any images created by the Products which may have the option to be save or reproduced by the Licensee.
2. License

2.1 In consideration of Licensee’s agreement and compliance with the terms and conditions contained in the HEPGTC and in this License, CAE grants to Licensee a personal, non-exclusive, non-transferable license to use the Software and Data exclusively with the Product, and with the device on which this License appears.

2.2 Without limiting the foregoing or any other terms in this License, Licensee shall, and shall ensure that any Authorized Users:

2.3 Except for the License granted herein, CAE grants no express or implied right under any patent, copyright, mask work right, trademark, know how or other intellectual property rights. The Licensee shall not obtain any rights to CAE’s property, or any part thereof, by implication, estoppel or otherwise. Title to and full ownership of any trade secrets and other intellectual property rights related to the Product and components thereof shall remain with CAE and, if applicable, its suppliers. For clarification, Licensee agrees that the source code for the Software is a trade secret of CAE and only CAE shall have the right to alter, maintain, enhance or otherwise modify the Software.

a. not copy (save and except for normal back up and disaster recovery purposes provided such copy shall include CAE’s copyright and any other proprietary notices indicated on the Software and Data), ghost, export or produce any derivative works from the Product, or any part thereof, not network the Product without CAE’s prior written approval, or make it available for concurrent use;
b. not sell, attempt to sell or transfer (unless in compliance with the HEPGTC), sub-license, encumber the Software or Data;
c. not modify the Product in any way, combine with other programs, or reverse engineer, screen scratch, decompile or disassemble any Software nor otherwise attempt to create or derive the source code related thereto;
d. not deface or remove any copyright or proprietary notices;
e. not use the Product without the key, if provided with the Product, or attempt to develop or develop any means or technology which would enable Licensee to bypass the use of the key to operate the Product;
f. prevent anyone other than Authorized Users from accessing or using the Product;
g. not incorporate the Product, in whole or in part, to any product or service that Licensee would make available to a third party, on a commercial basis or not.

2.4 Notwithstanding anything else contained in this License, in no event shall Licensee use the Product and/or Confidential Information to enable, support, or otherwise aid Licensee or a third party to develop any product, software or service competitive with any of CAE’s products.

2.5 CAE reserves the right to embed a software security mechanism within the Product to monitor usage of the Product to verify Licensee’s compliance with this Agreement, as well as to control access to the Software through use of license administration software.

2.6 Licensee hereby recognizes that the entire rights, title and interests in and to Work remain the exclusive property of CAE. Licensee shall not modify such Work in any way whatsoever and shall not remove or alter any CAE notices. However, Licensee is permitted to produce and reproduce such Work only for non-commercial educational purposes.
3. Consent to Use of Collection Data and Feedback

3.1 Licensee agrees that CAE may collect and use technical data and related information, times ("Collection Data"), including but not limited to technical information about your Product that is gathered periodically to facilitate the provision of Software updates, Product support and other services related to your Product such as Software feature usage and run times. Such Collected Data shall be anonymous, and shall not personally identify any individual users. In the event that Licensee wishes to opt-out of permitting CAE from having access to Collected Data, Licensee must inform CAE of this requirement.

3.2 Upon the request of CAE, Licensee agrees to provide CAE, from time to time, with comments, suggestions, data, information or feedback ("Feedback") on the Product.

3.3 Licensee acknowledges and agrees that such Feedback and Collected Data may be freely used by CAE, at its sole discretion, for the design, development, improvement, marketing and commercialization of its products and services, without any restrictions based on confidentiality or intellectual property rights.

4. Term and Termination

4.1 This License shall become effective as of the date of your acceptance of this License and shall remain in effect until terminated as provided hereafter.

4.2 This License terminates immediately upon termination of the HEPGTC.

4.3 CAE may terminate this License immediately, upon written notice, should Licensee (a) attempt to, directly or indirectly, assign or transfer any of the rights granted to it pursuant to this License without CAE's prior written authorization, (b) disclose, in whole or in part, any Confidential Information, (c) use the Software otherwise than as authorized herein, or (d) is otherwise in breach of its obligations to protect the intellectual property contained in the Product. In addition, should Licensee fail to comply with any other terms and conditions of this Agreement and such failure is not cured within thirty (30) days after receipt of CAE's written notice, CAE may terminate this Agreement immediately.

4.4 Upon termination of this License, Licensee agrees to immediately discontinue use of the Confidential Information and the Product, and to return same to CAE as well as any copies.

4.5 The following shall survive and continue in full force and effect notwithstanding any termination of this License: the obligations of Licensee under Sections 2 (License), 5 (Non-Disclosure); as well as any other clauses which by their nature and context are intended to survive.

5. Non-Disclosure

5.1 Licensee agrees to keep this License and all Confidential Information obtained hereunder in strict confidence, and shall only disclose same a) to Authorized Users solely for the Purpose and provided such access to the Product conforms, at all times, to the terms and conditions governing the use of the Product contained herein, or b) if required to be disclosed by law, and only to the extent of such disclosure and limited to the purpose requested, with prior notice to CAE to permit it to seek an appropriate remedy to prevent the disclosure, or alternatively to agree to the terms of such disclosure.
5.2 The obligations of confidentiality, use and non-disclosure referred to in this Section 5 shall not apply to information which: (i) is or becomes publicly available through no fault of Licensee; (ii) was already in the rightful possession of Licensee prior to its receipt from CAE; (iii) is independently developed by Licensee, provided it is not, in whole or in part, related to the Product; and (iv) is obtained by Licensee in good faith and on a non-confidential basis and without a use restriction from a third party who lawfully obtained and disclosed such information. However, Confidential Information does not come within the foregoing exceptions merely because features of it may be found separately or within a general disclosure in the public domain.

5.3 Licensee agrees to be responsible for enforcing the terms of this Section 5 and to take such action, legal or otherwise, to the extent necessary to cause anyone having access to the Confidential Information to comply with the terms and conditions set forth herein (including all actions that Licensee would take to protect its own trade secrets and confidential information but with not less than reasonable care). Licensee shall be responsible and indemnify, defend and hold harmless CAE for any default caused by any such persons.

6. Irreparable Harm

6.1 Licensee acknowledges that the Software and Data constitute a special, irreplaceable asset of great value to CAE, and that a breach, in any way, of any of Licensee’s obligations under Sections 2 (License), and 5 (Non-Disclosure) hereof would cause serious and irreparable harm to CAE which may not be adequately compensated for in damages. If the Licensee breaches any of such provisions, Licensee consents to an injunction being issued against it restraining it from any further breach of such provision, without derogation from any other remedy which CAE may have in the event of such a breach.

7. Warranty

7.1 THE SOLE WARRANTIES PROVIDED BY CAE ARE LIMITED TO THE WARRANTIES PROVIDED IN THE HEPGTC. ANY WARRANTIES PROVIDED ARE PERSONAL AND NOT TRANSFERABLE.

8. Limitation of Liability

8.1 CAE’S LIABILITY SHALL IN NO CIRCUMSTANCES EXCEED THE LIMITATION OF LIABILITY INDICATED IN THE HEPGTC.

8.2 IN NO EVENT WILL CAE BE LIABLE FOR ANY LOSS OF USE, LOSS OF PROFIT, INTERRUPTION OF BUSINESS, OR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS), REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY, OR OTHERWISE, EVEN IF CAE HAS BEEN ADVISED OR SHOULD HAVE BEEN AWARE OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CAE’S LIABILITY TO LICENSEE FOR ANY CLAIM, WHETHER IN CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY, EXCEED THE PURCHASE PRICE OF THE PRODUCT PAID BY LICENSEE.
9. Third-Party Software

9.1 The Software may come bundled or otherwise be distributed with open source or other third party software, which is subject to the terms and conditions of the specific license under which it is distributed. OPEN SOURCE SOFTWARE IS PROVIDED BY CAE “AS IS” WITHOUT ANY WARRANTY, EXPRESS, IMPLIED, OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS EULA, AS IT RELATES TO ANY AND ALL CLAIMS ARISING OUT OF OR IN CONNECTION WITH OPEN SOURCE SOFTWARE, DELL SHALL HAVE NO LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF OPEN SOURCE SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

10. Administrative Positions

10.1 Applicable Law and Jurisdiction: This License shall be governed by, subject to, and interpreted according to the laws of the State of Florida, U. S. A., without regard to its conflict of law rules. In all cases, the Parties expressly exclude and waive the application of the United Nations Convention on Commercial Agreements for the International Sale of Goods (1980) (Vienna Sales Convention) as amended. The exclusive jurisdiction for the resolution of any and all disputes arising out of or in connection with this Agreement shall be a court of appropriate jurisdiction located in the State of Florida, U.S.A. Each Party hereby waives any right that it might otherwise have to object to such venue or seek dismissal of the action on the basis of forum non-conveniens. EACH PARTY HERETO IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS LICENSE. Notwithstanding the foregoing, if a party seeks injunctive proceedings to preserve confidentiality obligations or intellectual property rights, then it is entitled to seek relief before the competent court/body of any jurisdiction.

10.2 United States Government Licensee: If Licensee is the United States Government (“U.S. Government”) or a unit or agency of the U.S. Government, the Software and Data are deemed to be “commercial computer software” and “commercial computer software documentation”, respectively, pursuant to DFAR Section 227.7202 and FAR Section 12.212 b) as applicable. Any use, modification, reproduction, release, performance, display, or disclosure of the Software and/or Data by the U. S. Government, or any of its units or agencies shall be governed solely by the terms of this License and the HEPGTC. Any technical data provided by CAE with the Product that is not covered by the above provisions is deemed to be “technical data-commercial items” pursuant to DFAR Section 252.227.7015(a).

10.3 Export Controls: Licensee acknowledges that the laws and regulations of the United States may restrict the export and re-export of commodities and technical data of United States origin, including the Software. Licensee agrees that it will not export or re-export Software of, or containing items of, United States origin, in any form, without the appropriate United States and foreign governmental licenses.
10.4 Excluded Data: Licensee acknowledges that Software provided under this License are not designed with security and access management for the processing and/or storage of the following categories of data: (1) data that is classified and or used on the U.S. Munitions list, including software and technical data; (2) articles, services and related technical data designated as defense articles and defense services; (3) ITAR (International Traffic in Arms Regulations) related data; and (4) other personally identifiable information that is subject to heightened security requirements as a result of Licensee's internal policies or practices or by law (collectively referred to as “Excluded Data”). Licensee hereby agrees that Licensee is solely responsible for reviewing its data that will be provided to CAE (or to which CAE will have access) to ensure that it does not contain Excluded Data.

10.5 No Waiver: No omission or delay by either party at any time to enforce a right or remedy reserved to it or to require performance of any of the terms of this License at the times designated, shall be a waiver of such right or remedy to which the party is entitled, nor shall it in any way affect the right of the party to subsequently enforce such provisions.

10.6 Modification: No provision of this License shall be deemed waived, amended or modified by either party unless the waiver, amendment or modification is in writing and signed by each of the parties to this License.

10.7 Severity: If any one or more of the provisions of this License is for any reason held invalid, illegal or unenforceable, the remaining provisions of this Agreement will be unimpaired.

End of End User License Agreement
# System Specifications

<table>
<thead>
<tr>
<th>Hardware</th>
<th></th>
</tr>
</thead>
</table>
| **Equipment** | 24” flat LCD monitor  
Haptic device  
Two instruments with 6 degrees of freedom  
Camera with 5 degrees of freedom, changeable virtual lenses and image capture feature  
Dual foot pedal for electro-surgery and advanced energy devices |
| **Dimensions** | 18” W x 38” D x 68” H (Adjustable)  
46cm W x 96cm D x 173cm H (Adjustable) |
| **Weight** | 195 lb (90 kg) |
| **Electrical** | 100-120 V, 50-60 Hz, 10A  
200-240 V, 50-60 Hz, 5A |
| **Storage Temperature** | -40°C to +65°C (-40°F to +149°F) |
| **Storage Humidity** | 20% to 80% without condensation |
| **Operating Temperature** | 10°C to 32°C (50°F to 90°F) |
| **Operating Humidity** | 20% to 80% without condensation |
CAUTIONS AND WARNINGS

Please read and understand these cautions and warnings before you begin using the simulator.

Operations

• Do not operate your equipment with any covers removed
• Do not use your equipment in a wet environment. Protect equipment from liquid intrusion.
• Do not put any object on top of the bottom platform. Movement of the lift mechanism can cause crush hazard, resulting in possible bodily injuries and damaged equipment.
• Do not jam the motor lift mechanism onto an object. This is a misuse and subjects the motor to burn out. It can also result in possible bodily injuries and damaged equipment.

Ergonomics

• Tip-over hazard: Do not move your equipment without fully lowering the lift mechanism. Failure to do so can result in possible bodily injury and damaged equipment.
• Improper or prolonged keyboard use may result in injury
• Viewing a monitor screen for extended period of time may result in eye strain
# Table of Contents

End User License Agreement For CAE Products ................................... i
System Specifications ................................................................. vii
Cautions and Warnings ................................................................. ix
  Operations .................................................................................. ix
  Ergonomics ................................................................................ ix
Introduction .................................................................................. 1
Equipment Overview ................................................................. 3
  LapVR Device .............................................................................. 3
  LapVR Handle Attachments ...................................................... 4
  LapVR Pedals ............................................................................. 5
  Monitor Pole .............................................................................. 5
  Monitor ..................................................................................... 5
  Computer .................................................................................. 5
Before Beginning Setup .............................................................. 6
Using the Simulator ....................................................................... 7
  Powering On the Simulator ...................................................... 8
  Adjusting the Height ............................................................... 9
  Starting the Software ........................................................... 10
    Interface Overview ............................................................. 12
    My Tasks ............................................................................... 13
Selecting a Simulation ............................................................... 15
  Reviewing the Didactic Content ............................................. 18
  Changing User Parameters .................................................... 24
Running a Simulation .................................................................. 26
  Using the Camera .................................................................... 29
  Adjusting the Pitch ............................................................... 30
  Selecting an Instrument ......................................................... 35
  Using the Handles ................................................................... 36
  Using the Pedals ...................................................................... 38
Ending a Simulation .................................................................... 39
Viewing Results .......................................................................... 40
Viewing Report ........................................................................... 41
Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing Usage Summaries</td>
<td>44</td>
</tr>
<tr>
<td>Viewing Personal Data</td>
<td>45</td>
</tr>
<tr>
<td>Printing Data from the Simulator</td>
<td>45</td>
</tr>
<tr>
<td>Printing Data to a Network Printer</td>
<td>46</td>
</tr>
<tr>
<td>Printing Data to a PDF File</td>
<td>48</td>
</tr>
<tr>
<td>Modifying Language Preferences</td>
<td>50</td>
</tr>
<tr>
<td>Hiding the Available Tasks Panel</td>
<td>51</td>
</tr>
<tr>
<td>Exiting the Software</td>
<td>52</td>
</tr>
<tr>
<td>Appendix A - Module Descriptions</td>
<td>55</td>
</tr>
<tr>
<td>Module Instruments and Required Equipment</td>
<td>58</td>
</tr>
<tr>
<td>Essential Skills</td>
<td>58</td>
</tr>
<tr>
<td>Procedural Skills</td>
<td>59</td>
</tr>
<tr>
<td>General Surgery</td>
<td>61</td>
</tr>
<tr>
<td>Ob-Gyn Procedures</td>
<td>63</td>
</tr>
</tbody>
</table>
INTRODUCTION

Welcome to the CAE LapVR Simulator user guide. This guide provides instructions on how to use the LapVR simulator.

The LapVR simulator provides a safe, virtual environment for learners to practice laparoscopic techniques and skills. Learners can range from medical students to licensed medical professionals.

Preprogrammed tasks and courses with didactic content, real-time simulation haptics and post-simulation evaluation metrics help create the comprehensive training experience for learners. Through the combination of these tools, learners are able to recognize the realistic anatomical and spatial limitations of performing laparoscopic surgery on a human patient and master the techniques required for safe, successful surgeries.
EQUIPMENT OVERVIEW

The standard equipment for the LapVR simulator includes all the necessary equipment for using the simulator. The items listed in the table below are shipped with the simulator.

<table>
<thead>
<tr>
<th>Standard Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LapVR Device</td>
</tr>
<tr>
<td>LapVR Handle Attachments</td>
</tr>
<tr>
<td>LapVR Pedals</td>
</tr>
<tr>
<td>Monitor Pole</td>
</tr>
<tr>
<td>Monitor</td>
</tr>
<tr>
<td>Computer</td>
</tr>
</tbody>
</table>

LapVR Device

The LapVR device comes as a single entity. The haptic device, camera, keyboard, mouse and lifting mechanism are all part of the LapVR device. The device is secured to a four-wheel platform for convenient mobility when storing the simulator. Additional parts, which are packaged and shipped separately, will require minor assembly.
LapVR Handle Attachments

The LapVR comes with two pairs of quick change handle attachments: the pistol grip attachments and the suturing attachments.

The pistol grip attachments are most commonly used for several instruments throughout the various modules.

The Suturing Attachments

The suturing grip attachments are used for more specific modules that require the use of instruments with a constant grip.
LapVR Pedals

The LapVR comes with foot pedals to provide power controls for simulations that use electro-surgery and advanced energy devices.

Monitor Pole

The monitor pole is shipped separately from the LapVR device and requires some assembly before the simulator can be used. Two plates (one front and one back) connect to the LapVR device to create the monitor pole. The monitor arm is attached to the monitor pole front plate.

Monitor

One flatscreen monitor is provided with the purchase of a LapVR simulator.

Computer

The computer for the LapVR simulator is shipped inside the LapVR device. To access the computer, press on the access door located on the side of the simulator.
Before Beginning Setup

Proper operation of the LapVR simulation requires correct configuration. Before setting up the system, keep in mind these basic guidelines:

- Read and understand the Cautions and Warnings in the beginning of this User Guide
- Follow and complete the sequence of Setup steps carefully
- Do not power on any components until instructed in the text
- Do not install any Windows updates or anti-virus software when connecting to the network
- When unpacking the simulator for the first time, use box cutters carefully to protect both the packaging and the product

**Note:** Keep all original shipping materials, including boxes. Warranty and repair items must be returned and shipped in their original packaging.
USING THE SIMULATOR

The LapVR simulator integrates realistic laparoscopic surgical handles and pedals with an interactive software to provide learners with a comprehensive and quantitative training experience. Administrators and trainers are responsible for setting up the user accounts, managing the learners' curriculum and reviewing learners' results to identify areas for improvement.

**Note:** For optimal use, no other software programs should be open while the simulator software is running.

**Note:** To use the printing functions in the software, a network connection must be established. For further assistance, contact your system administrator.
Powering On the Simulator

Before starting the software, ensure that the simulator is powered on. In the case that the simulator is not powered on, follow the instructions below.

To power on the simulator:

a. Ensure the top of the master power button, located on the back of the simulator, is pressed in

b. Press the top part of the orange power switch located on the back right side of the simulator

The switch illuminates when the simulator is powered on.
Adjusting the Height

It is important to ensure the simulator is at the appropriate height for the learner to effectively perform the procedures. The LapVR simulator has arrows that allow the learner to adjust the height as needed.

To adjust the height of the simulator:

a. Press the up or down illuminated green arrow buttons located on the front of the lifting mechanism
b. Hold the up or down arrow button for a few seconds to activate the lift mechanism
c. Once the lift is activated, the device begins moving up or down
d. Release the button when the desired height is achieved
Starting the Software

Once the LapVR simulator is powered on, the software launches automatically and the Login screen appears.

To log in to the software:

1. Enter the assigned username in the **Username** field. To log in as a guest, enter *guest*
   
   **Note:** Any tasks performed while using the guest login will be recorded in the guest account only if the administrator selected Data Recorded in the guest personal data screen.
2. Enter the assigned password in the **Password** field. To log in as a guest, enter *guest.*
3. Click **Login**
The LapVR Home screen appears.

From the Home screen, users can select and start a simulation exercise, view personal data and print usage summaries and reports. Users are also able to modify language preferences and access the user guide from the Home screen.
Using the Simulator

Interface Overview

The LapVR user interface contains a dashboard of icons that represent the tools available to users.

The Icon Dashboard

When an icon is selected, the icon will appear blue and the associated content will appear in the main screen on the interface. The left panel contains a list of options for users.

The My Tasks icon is selected by default and referred to as the Home screen when users first login to the software.
My Tasks

From the My Tasks screen, users can choose a simulation, review didactic content, run a simulation and review results.

My Profile

From the My Profile screen, users can review their personal data including username, registration and contact information and privileges.
Using the Simulator

Usage

From the Usage screen, review and print their usage summaries for completed simulations.

The Usage Screen

Reports

From the Reports screen, users can review and print reports for completed simulations.

The Reports Screen
Selecting a Simulation

Each module in the software contains a specially-developed curriculum to test learners on their essential skills or ability to perform acute laparoscopic procedures. Based on the courses and tasks assigned to the learner by the administrator, the training experience is customized to help the learner meet the necessary educational objectives.

Note: Learners only have access to the curriculum assigned to them by the administrator.

To select a simulation:

1. Ensure the **My Tasks** icon is selected and the Home screen is displayed

![The Home Screen](image)

Note: When selected, the icon on the dashboard is highlighted blue.

![The Icon Dashboard](image)
2. From the **Available Tasks** panel on the left side of the screen, click the desired module

The desired module

**The Home Screen**

A list of available courses appears.

3. Click the desired course

The desired course

**The My Tasks Screen**

A list of available tasks appears.
4. Click the desired task

The My Tasks Screen

The didactic content appears in the main screen of the software.
Reviewing the Didactic Content

Before beginning a simulation, users should review the didactic content for the selected procedure. The didactic content contains information users need to know before and after performing a specific procedure.

The didactic content for tasks include Training Objectives, Instructions, Demos, Case History, Pre-Procedures, Parameters and Post-Procedures. Essential Skills and Procedural Skills modules include Training Objectives, Instructions, Demos and Parameters only. The Results screen is only accessible after a task is completed.

Didactic Content Screen for Procedure Module Task

Note: Parameters can only be changed for specific tasks when the user parameters are unlocked by an administrator.
Training Objectives

To access the Training Objectives screen, click the **Training Objectives** tab. When selected, the tab appears blue and the Training Objectives screen appears.

---

**The Training Objectives Screen**

The Training Objectives screen outlines the training goals and objectives users meet upon successful completion of the procedure.

---

**Case 2**

<table>
<thead>
<tr>
<th>TRAINING OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Gastrointestinal Bleeding (UGI-Bleeding) module covers the technical skills needed for performing a diagnostic and therapeutic upper gastrointestinal procedure in a simulated environment. It provides valuable practice in navigating the endoscope to the duodenum, including intubating the esophagus and pylorus, and administering the proper techniques to treat hemorrhage in the upper gastrointestinal tract. The procedure is typically performed under moderate conscious sedation to increase patient tolerance of the endoscope.</td>
</tr>
</tbody>
</table>

**Goals:**

1. To navigate an endoscope through the upper gastrointestinal tract including intubation of both esophageal sphincters and the pylorus in the simulated environment;
2. Validate techniques for positioning the endoscope within the 3-D model to properly inspect the mucosa, which includes refracting the scope tip to inspect all areas of the stomach;
3. Learn the basic management of bleeding ulcers;
4. Learn the difference between active bleeding, visible vessels and adherent clots;
5. Proficient in the use of epinephrine injection, cautery, and clip application in the management of bleeding;
6. Understand the risk and causes of complications in the procedure;
7. Become acquainted with some of the usual and side effects of common pharmacological agents inherent to performing this procedure;
8. Proper technique will be tracked during the procedure. Items ranging from improper needle-use and working channel damage to life threatening complications will be reviewed.

---
Instructions

To access the Instructions screen, click the **Instructions** tab. When selected, the tab appears blue and the Instructions screen appears.

The **Instructions** tab provides an overview of the procedure and directions for navigating through and performing the procedure.
Demos

To access the Demos screen, click the Demos tab. When selected, the tab appears blue and the Demos screen appears.

The Demos Screen

The Demos screen provides users with a tutorial on how to perform the selected procedure.
Case History

To access the Case History screen, click the **Case History** tab. When selected, the tab appears blue and the Case History screen appears.

The Case History tab

**CASE HISTORY**

Mr W is a 55 year old male admitted to the ER after two episodes of coffee-ground vomiting. He has an unremarkable medical history and takes no medication on a regular basis. However he has been taking NAXID for the past two weeks to treat a back ache. He has noted epigastric burning for the past week. He is feeling dizzy. Vital signs are normal except for slight tachycardia (105 bpm). Please perform an EGD on this patient.

The Case History Screen

The Case History screen provides users with background information about the patient including symptoms, medical history and documentation of previous conditions and procedures.
Pre-Procedures

To access the Pre-Procedures screen, click the Pre-Procedures tab. When selected, the tab appears blue and the Pre-Procedures screen appears.

The Pre-Procedures Screen

The Pre-Procedures screen provides steps the user needs to complete prior to beginning the procedure.
Post-Procedures

To access the Post-Procedures screen, click the **Post-Procedures** tab. When selected, the tab appears blue and the Post-Procedures screen appears.

The Post-Procedures screen provides actions users should perform after the procedure is complete.

### Changing User Parameters

Every task available on the simulator contains parameters for determining if the learner performed a procedure successfully. For some procedures, the administrator can provide users with the ability to change certain parameters such as timeouts, bleeding, and virtual aids. However, some modules do not contain any adjustable user parameters.

From the Parameters screen, learners can change the parameters prior to beginning a simulation. After the simulation is complete, the parameters return to their default values.

**Note:** Only unlocked user parameters can be adjusted by the user.

To change user parameters:

1. Select a task and click the **Parameters** tab.
The Parameters screen appears.

2. Use the slider to adjust the parameter to the desired value.

The adjusted parameter appears yellow and the changes are recognized until the user navigates to a different task or completes the simulation. Users can also cancel the parameter changes by clicking the Revert Changes button.

Note: Parameters with a value field can also be adjusted by replacing the desired value in the value field. The new value must be within the parameters value range.
Running a Simulation

Prior to running a simulation, prepare for the simulation by completing the following steps:

1. Select the desired task
2. Review the associated didactic content
3. Complete any parameter adjustments, if applicable

After the preparation steps are complete, start the simulation.

To start a simulation:

1. From any screen within the selected task, click the **Start Simulation** button
The calibration prompt screen appears.

### The Calibration Prompt Screen

2. Place the handles in the position displayed on the calibration prompt screen
3. Click **Continue**

   The calibration screen appears.

**WARNING:** DO NOT touch or move the handles while the calibration screen is displayed.
Once the calibration is complete, the simulation start screen appears and the simulation is launched.

**The Simulation Start Screen**

**Note:** The Appendectomy module displays an additional screen, the procedure position screen, before the simulation start screen appears.

**The Procedure Position Screen**

The procedure position screen appears briefly and automatically transitions to the simulation start screen.
Using the Camera

During laparoscopic procedures, the camera is used to ensure the procedure is performed correctly and without harm to the patient. The laparoscopy camera requires navigation independent from the other laparoscopic instruments.

To use the camera:

1. Select a simulation and click the **Start Simulation** button
   
   After the calibration process is complete, the Simulation Start screen appears
2. Gently push the camera down into the LapVR device to adjust the camera for a closer view
3. Gently pull the camera up from the LapVR device to adjust the camera for a broader view
4. Release the camera when the desired view is reached

**IMPORTANT:** If a learner does not meet the camera navigation parameters during a simulation, the Results screen displays an unsuccessful completion message, even if the other simulation parameters were successfully completed.
Adjusting the Pitch

To adjust the pitch of the camera, grasp the camera head and move the camera toward or away from the LapVR device.
Adjusting the Yaw

To adjust the yaw of the camera, grasp the camera head and move the camera to the left or right.

Adjusting the Angle

To adjust the angle of the camera, rotate the camera head.
Using the Simulator

Adjusting the Plane of View

To adjust the plane of view, rotate the knob under the camera head.

![The Laparoscopy Camera - Plane of View](image)

Changing the Camera Lens

To change the camera lens:

1. Pull the camera up from the LapVR device until the **Camera Lenses** menu appears on the bottom of the screen.

   Retracting the camera simulates the removal of the camera through the trochar during a real laparoscopic procedure in order to change the camera or lens.

![The Simulation Screen](image)
2. Hold the camera in place to keep the menu accessible
3. Press the **Change Lens** button on the top of the camera head to toggle through the lens options on the **Camera Lenses** menu

The selected lens options appears blue on the **Camera Lenses** menu.

4. Once the desired option is selected, gently push the camera down into the device to continue the simulation
Capturing an Image

To capture an image during the simulation, press the **Image Capture** button located on the top of the camera head.

The images captured during the simulation appear in the **Screen Capture** display on the **Results** screen when the simulation is complete.
Selecting an Instrument

During each simulation, the learner is evaluated on the proper selection and use of certain procedural instruments. Learners can select the desired instrument from Instruments menus located on each side of the simulation screen. The Instruments menus are customized for the specific module to narrow down the selection process.

To select an instrument:

1. Ensure the simulation screen is displayed on the monitor
2. Pull back both laparoscopy handles on the LapVR device to activate the simulation screen
   
   Retracting the handles simulates the removal of the current instruments through the trochar during a real laparoscopic procedure in order to change the instruments.

   The Instruments menus appear.
   
   Note: Learners can also use the computer mouse to click and expand the Instruments menus.

3. Turn the rotator located at the base of the left or right laparoscopy handle to select an instrument for the corresponding side

   On the simulation screen, the selected instrument appears blue in the Instruments menu.

4. Gently push the handle back into the LapVR device to confirm the selection and begin using the instrument
   
   Note: Certain instruments require a different handle than the standard pistol grip handle.
Using the Handles

Once the learner starts the simulation, the laparoscopy handles become the primary tools for navigating through the procedure and the software.

To use the handles:

1. From the My Tasks screen, select the desired task from the Available Tasks panel in the software.

2. Ensure the appropriate handle attachments are connected to the LapVR handles prior to beginning the simulation.
   
   **Note:** The handle attachments can be changed during a running a simulation.

3. Review the didactic content and click Start Simulation to start the simulation.
The Simulation Start screen appears.

4. Insert thumb and middle finger into the pistol grip handle attachments. For the suturing handle attachments, wrap entire palm around the handle.

5. Retract the handles to activate the Instruments panels on each side of the simulation screen.

6. Twist the handle rotator below the base of the handle to select the electro-surgery instrument that requires power control from the pedals.

7. Reinsert the handles to lock the selected instrument.

8. To select the highlighted instrument, gently insert the handles into the simulator.

9. Squeeze the handle to perform a surgical action (i.e. cutting, grasping, clipping, irrigation) and release the handle to discontinue the action.
Using the Simulator

Using the Pedals

The pedals are used for electro-surgery and advanced energy devices and only available for use in certain modules. For example, in the Ob-Gyn Procedures module, the Cutting mode is activated by the left foot pedal and the Coagulation mode is activated by the right foot pedal.

To use the pedals:

1. Remove the pedals from the storage tray located underneath the simulator
2. Place the pedals directly in front of the simulator
3. From the My Tasks screen, select the desired task
4. Review the didactic content and click **Start Simulation** to start the simulation
Using the Simulator

5. Retract the handles to activate the **Instruments** panels on each side of the simulation screen
6. Twist the handle rotator below the base of the handle to select the electro-surgery instrument in the software that requires power control from the pedals
7. Reinsert the handles to lock the selected instrument
8. Press down gradually on the foot pedal to power the selected instrument during the simulation

Ending a Simulation

The LapVR simulator has multiple ways in which a simulation can end.

In some cases, the learner makes a procedural error and is unable to correct the error within the allotted time for the simulation. Certain task parameters affect what types of injuries or errors are acceptable and correctable within a simulation. If a learner performs a fatal error, the simulation will end before the time expires.

In other cases, the learner completes the procedure before the allotted time has expired and the simulation ends.

Learners also have the option to stop a simulation at any time during the procedure.

To end a simulation manually, from the simulation screen, click the **End Simulation** button.
Viewing Results

Once the simulation is complete, the Results screen appears.

If the learner meets all of the parameters for the simulation, the **Successful Completion** message displays.

If the learner did not meet all of the parameters for the simulation, the **Unsuccessful Completion** message displays.
Learners can view customized reports from the Reports screen.

To view reports:

1. Click the **Reports** icon
2. From the **Tasks** options, select the desired tasks to include in the report or select **All Tasks**.

3. From the **Reports** options, select the desired reports to include in the report or select **All Reports**.

---

**The Reports Screen**
The report appears in the **Print Preview** panel.
Viewing Usage Summaries

To view usage summaries, click the **Usage** icon.

![The Icon Dashboard](image)

![The Usage Summary Screen](image)
Viewing Personal Data
To view personal data, click the My Profile icon.

The Icon Dashboard

The Personal Data Screen

Printing Data from the Simulator
Learners can print the data from the Results screen after completing a task. The print feature is also available on the Personal Data, Usage Summaries and Reports screens.

The Reports screen is the only screen that requires the learner to select the data to include in the report and generate a print preview prior to printing.

For more information on generating a print preview for Reports, see Viewing Reports.
Printing Data to a Network Printer

A network connection is required for printing to a network printer. Contact your administrator for further assistance.

To print data to a network printer:

1. From the selected screen, click the **Print** button located near the bottom right corner of the screen.

**The Results Screen**

*Note:* The **Print** button on the Personal Data screen is located near the top right corner of the screen.
2. Select the desired network printer
3. Click **Print**
Printing Data to a PDF File

If network connection is not available or no network printers are available, users can print data to a PDF file and save the file to an external device to print on a computer with a network printer connection.

To print the data to a PDF file:

1. From the selected screen, click the **Print** button located near the bottom right corner of the screen

2. Select the **PDF Complete** program
3. Click **Print**

![The PDF Complete Document Creation Options Window](image)

**The PDF Complete Document Creation Options Window**

4. Select the desired folder where the file will be saved
   
   **Note:** If the location is on an external device, use the USB port located on the back of the simulator to connect the external device to the simulator.

5. Enter the desired file name in the **File name** field

6. Click **Save**
   
   The PDF Complete window appears.

![The PDF Complete Window](image)

**The PDF Complete Window**

7. Click **Done**
The PDF Complete Special Edition window appears with the completed PDF.

Modifying Language Preferences

Learners can change the language settings for their personal account using the language preferences menu in the top right corner of the screen.

To modify the language preferences:

1. Click the Language Preferences menu

2. Select the preferred language from the drop-down menu

   A checkmark appears next to the selected language and the language is applied to the software.

**Note:** Since the LapVR software is currently only available in English, no other options are available to set as the default language.
Hiding the Available Tasks Panel

Learners can hide the Available Tasks panel to view the didactic content in full screen mode.

To hide the Available Tasks panel:

1. From the icon dashboard, click the **My Tasks** icon
2. From the **Available Tasks** panel, select the desired task
3. Click the **Hide Available Tasks** arrow
   The didactic content expands to the width of the full main screen.
Exiting the Software

Learners should log out of the software once they are completed with their training session.

To exit the software:

1. Click on the username in the top right corner of the screen

2. Select **Logout** from the drop-down menu
APPENDIX A - MODULE DESCRIPTIONS

The LapVR simulator contains several modules for learners to practice performing laparoscopic procedures using different techniques and tools. Modules are bundled in four separate categories: Essential Skills, Procedural Skills, General Surgery and Ob-Gyn Surgery.

The following table outlines the categories and modules offered for the LapVR simulator.

<table>
<thead>
<tr>
<th>Category</th>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Skills</td>
<td>Camera Navigation</td>
<td>Use the camera to adjust the plane of view, yaw, pitch and angle and align the red guide circle with the target yellow circle.</td>
</tr>
<tr>
<td></td>
<td>Clip Application</td>
<td>Use the instruments to clip a blood vessel in a timely and effective manner.</td>
</tr>
<tr>
<td></td>
<td>Cutting</td>
<td>Use the instruments to grasp and cut a circle on a piece of simulated cloth.</td>
</tr>
<tr>
<td></td>
<td>Peg Transfer</td>
<td>Use the instruments to grasp and place the pegs in the holes.</td>
</tr>
<tr>
<td></td>
<td>Knot Tying</td>
<td>Use the instruments to grasp a thread and tie multiple knots in a timely and effective manner.</td>
</tr>
<tr>
<td></td>
<td>Needle Driving</td>
<td>Use the instruments to drive the needle through the targets located on flexible tissue.</td>
</tr>
<tr>
<td>Procedural Skills</td>
<td>Adhesiolysis</td>
<td>Use the instruments to complete a successful lysis of an adhesion in the bowel.</td>
</tr>
<tr>
<td></td>
<td>Running the Bowel</td>
<td>Use the instruments to gently manipulate, measure and inspect the small intestine without causing damage.</td>
</tr>
<tr>
<td></td>
<td>Suturing and Knot Tying</td>
<td>Select one of the tasks to to close an enterotomy on as section of the bowel: Continuous Stitch, Horizontal Stitch, Loop Litigation and Simple Interrupted.</td>
</tr>
</tbody>
</table>
Appendix A - Module Descriptions

<table>
<thead>
<tr>
<th>Category</th>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Surgery</td>
<td>Appendectomy</td>
<td>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful laparoscopic appendectomy. These skills include navigating the camera, grasping, clipping, cutting, lysing adhesions and electro-surgery.</td>
</tr>
<tr>
<td></td>
<td>Cholecystectomy</td>
<td>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful cholecystectomy. These skills include navigating the camera, grasping, clipping, cutting, lysing adhesions and electro-surgery. Additional specific objectives include:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dissect the peritoneal sheath and fatty tissue of Calot's Triangle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Complete proximal and distal clipping of the cystic duct and artery.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cut the cystic duct and artery.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Separate and remove the gallbladder from the liver bed.</td>
</tr>
</tbody>
</table>
## Appendix A - Module Descriptions

<table>
<thead>
<tr>
<th>Category</th>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Ob-Gyn Surgery**| **Bilateral Occlusion** | Apply the skills practiced in the essential skills and procedural skills modules to perform a successful bilateral occlusion on the fallopian tubes. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:  
  - Isolate the tubes.  
  - Complete occlusion of the tubes using Filshie clips or electrosurgery. |
|                   | **Tubal Ectopic Pregnancy** | Apply the skills practiced in the essential skills and procedural skills modules to perform a successful removal of ectopic tissue from the fallopian tube. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:  
  - Isolate the tubes.  
  - Remove the ectopic tissue from fallopian tube.  
  - Use retrieval bag to capture ectopic tissue from the tube via Salpingostomy or to capture both ectopic and fallopian tissue via Salpingectomy. |
|                   | **Salpingo Oophorectomy** | Apply the skills practiced in the essential skills and procedural skills modules to perform a successful removal of ectopic tissue from the fallopian tube. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:  
  - Isolate the tube.  
  - Remove the fallopian tube and ovary.  
  - Use retrieval bag to capture the fallopian tube and ovary. |
Module Instruments and Required Equipment

In each of the modules, different instruments are available to the user for completing a task. Users should also note the limitations that an administrator can place on their usage of the instruments and the equipment required to complete a selected task.

**Essential Skills**

The Essential Skills modules give learners an opportunity to practice and master essential techniques before attempting a procedural task.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera Navigation</td>
<td>• Camera</td>
<td>None</td>
<td>• Camera</td>
</tr>
<tr>
<td>Peg Transfer</td>
<td>• Straight Grasper</td>
<td>The administrator has the ability to restrict the use of the grasper for either hand.</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Probe</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td>Cutting Skill</td>
<td>• Straight Grasper</td>
<td>The administrator has the ability to restrict the use of the metzenbaum for either hand.</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Clip Applicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clipping Skill</td>
<td>• Straight Grasper</td>
<td>The administrator has the ability to restrict the use of the clip applicator for either hand.</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Clip Applicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needle Driving Skill</td>
<td><strong>Needle Drivers:</strong></td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Curved Left</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Curved Right</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knot Tying Skill</td>
<td><strong>Needle Drivers:</strong></td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Curved Left</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Curved Right</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Procedural Skills

The Procedural Skills modules give learners an opportunity to practice and master procedural techniques before attempting a procedural task.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adhesiolysis Procedural Skill</strong></td>
<td><strong>Graspers:</strong></td>
<td>The administrator has the ability to restrict the use of multiple instruments on either hand.</td>
<td>• Pistol grip handles • Camera</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Babcock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fenestrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scissors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Other:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrosurgery:</strong></td>
<td></td>
<td></td>
<td>• Pistol grip handles • Camera • Foot pedals</td>
</tr>
<tr>
<td></td>
<td><strong>Electrosurgery:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Spatula</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• L-Hook</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Bipolar Grasper</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Running the Bowel Procedural Skill</strong></td>
<td><strong>Graspers:</strong></td>
<td>The administrator has the ability to restrict the use of multiple instruments on either hand.</td>
<td>• Pistol grip handles • Camera</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Babcock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fenestrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Atraumatic Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scissors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Stapler</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Electrosurgery:</strong></td>
<td>The administrator has the ability to restrict the use of the clip applicator for either hand.</td>
<td>• Pistol grip handles • Camera • Foot pedals</td>
</tr>
<tr>
<td></td>
<td>• L-Hook</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A - Module Descriptions

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
</table>
| Suturing and Knot Tying | **Needle Drivers:**   | None                    | • Pistol grip handles  
|                         | • Straight            |                         | • Suturing handles   
|                         | • Curved Left         |                         | • Camera             
|                         | • Curved Right        |                         |                    |
|                         | **Drivers with Needle:** |                        |                    |
|                         | • Straight            |                         |                    |
|                         | **Scissors:**         |                         |                    |
|                         | • Suture Scissors     |                         |                    |
| Loop Litigation         | **Graspers:**         | None                    | • Pistol grip handles  
|                         | • Straight            |                         | • Suturing handles   
|                         | **Scissors:**         |                         | • Camera             
|                         | • Suture Scissors     |                         |                    
|                         | **Loop Tool**         |                         |                    |
General Surgery

The General Surgery modules allow learners to use the practiced skills from the Essential Skills and Procedural Skills modules to perform multi-step laparoscopic procedures from start to finish.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendectomy</td>
<td><strong>Graspers:</strong></td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Maryland</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scissors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cutter Stapler:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 45mm vascular load</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 45mm bowel load</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Other:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Loop tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clip applicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction/irrigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Electrosurgery:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• L-Hook</td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Advanced device</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Foot pedals</td>
</tr>
</tbody>
</table>
## Appendix A - Module Descriptions

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholecystectomy</td>
<td>Graspers:</td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>Dissectors:</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maryland dissector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scissors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clip applicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction/irrigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrosurgery:</td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• L-Hook</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Foot pedals</td>
</tr>
</tbody>
</table>
Ob-Gyn Procedures

The Ob-Gyn Surgery modules allow learners to use the practiced skills from the Essential Skills and Procedural Skills modules to perform acute laparoscopic procedures on simulated female reproductive organs.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral Tubal Occlusion</td>
<td>Graspers:</td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Allis</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Babcock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Atraumatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dissectors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maryland dissector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scissors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Probe</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Filshie clip</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction/irrigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterine Manipulator</td>
<td>Electrosurgery:</td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Biopolar grasper</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Kleppinger</td>
<td></td>
<td>• Camera</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubal Ectopic Pregnancy</td>
<td><strong>Graspers:</strong></td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Allis</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Babcock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Atraumatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dissectors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maryland dissector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scissors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Other:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Probe</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Filshie clip</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction/irrigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Retrieval bag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterine Manipulator</td>
<td><strong>Electrosurgery:</strong></td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Monopolar needle</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Biopolar grasper</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Kleppinger</td>
<td></td>
<td>• Foot pedals</td>
</tr>
</tbody>
</table>
## Appendix A - Module Descriptions

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Instrument Restrictions</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salpingo-Oophorectomy</strong></td>
<td><strong>Graspers:</strong></td>
<td>None</td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Straight</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Allis</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Babcock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Atraumatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dissectors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maryland dissector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scissors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metzenbaum</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Other:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Probe</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Filshie clip</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction/irrigation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Retrieval bag</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Uterine Manipulator</strong></td>
<td><strong>Electrosurgery:</strong></td>
<td></td>
<td>• Pistol grip handles</td>
</tr>
<tr>
<td></td>
<td>• Monopolar needle</td>
<td></td>
<td>• Suturing handles</td>
</tr>
<tr>
<td></td>
<td>• Biopolar grasper</td>
<td></td>
<td>• Camera</td>
</tr>
<tr>
<td></td>
<td>• Kleppinger</td>
<td></td>
<td>• Foot pedals</td>
</tr>
</tbody>
</table>
For more information about CAE products, contact your regional sales manager or the CAE distributor in your country, or visit caehealthcare.com.
Tel +1 941-377-5562 or 866-233-6384

For customer service, please contact CAE.

**Customer Service Headquarters - United States and Latin America**
Monday - Friday from 7:00 a.m. to 6:00 p.m. ET
Phone 1-866-462-7920
Email: customerservice@caehealthcare.com

**Customer Service - Canada**
Monday - Friday from 8:00 a.m. to 5:00 p.m. ET
Phone 1-877-223-6273
Email: can.service@caehealthcare.com

**Customer Service - Europe, Middle East, Africa, India, Asia and Australia**
Monday - Friday from 8:00 a.m. to 5:00 p.m. CET
Phone +49 (0) 6131 4950354
Email: international.service@caehealthcare.com

**Customer Service - United Kingdom and Ireland**
Monday - Friday from 9:00 a.m. to 5:00 p.m. GMT
Phone +44 (0)800-917-1851
Email: uk.service@caehealthcare.com

©2018 CAE
Part #165K400100