Training

BIC offers training to support independent and/or assisted research activities on our imaging systems.

Note that the preclinical imaging systems of the BIC are located within the ARC suite in HDB. Appropriate facility training will also be required.

MRI User Training

BIC offers 2 levels of user-training for our human and pre-clinical MRI systems, based on the guidelines set forth by the American College of Radiology (ACR). Level 1 (L1) ensures an individual can work safely around an MRI system and can observe / assist with an MRI study. L1 training is also required for all staff that provide emergency medical support to the Center's operations in NHB or HDB. Level 2 (L2) grants an individual system-operator status so they can run the scanner independently.

**Level 1 Certification:** This course covers basic MRI safety principles, familiarizes the user with the resources of the BIC in either HDB or NHB, and provides hands-on training with key safety features of the MRI scanner that may be required in an emergency.

Level 1 certification requires completion of the following modules:

1) The online UTLearn course BIC-MRI 101A (for our 3T Siemens Skyra system in NHB) or BIC-MRI 101B (for our 3T Siemens Vida system in HDB), which cover MRI Safety Basics. For the 7T Bruker preclinical system either course may be taken.

2) Submit the L1 training form (Biomedical Imaging Center - MRI L1 Training Form) to be logged into our database and request in-person training / orientation. Note that steps 3) and 4) must be completed prior to attending the in-person L1 Safety Training class.

3) For research users:
   a) with Human participants:
      i) Submit a screenshot of the Contacts tab for your lab’s up-to-date IRB protocol indicating that you are associated with your PI for research (a PI or Co-Investigator on the protocol will need to login to the UT Research Management suite). If you have an IRB protocol in progress or pending, or perform research that does not require an IRB protocol (e.g. phantom scanning only) please have your PI contact BIC to confirm you are associated with their group.
      ii) Attend the virtual UTLearn class BIC-MRI:102 on proctoring the completion of the MRI Safety Screening form for Research Participants

   b) performing Pre-clinical research:
      i) Submit your lab’s up-to-date IACUC protocol indicating that you are associated with your PI for preclinical research, or
      ii) If you have an IACUC protocol in progress or pending, or perform research that does not require an IACUC protocol (e.g. phantom scanning only), please have your PI contact BIC to confirm you are associated with their group.

4) Complete the MRI Safety Screening form for Personnel

5) Attend the in-person L1 Safety Training class on the appropriate system:
   - BIC-MRI: 103A for the Siemens Skyra system in NHB
   - BIC-MRI: 103B for the Siemens Vida system in HDB

PET/CT User Training

Training in how to operate our Siemens Inveon preclinical PET/CT system is available on-request. Please email BIC support to inquire about training options. Note that Radiation Safety training for Radioactive Materials (RAM) and/or X-ray devices is a pre-requisite before scanner training and is available through UT Austin Environmental Health and Safety (EHS).

Human PET/CT studies must currently be performed with the assistance of a PET/CT Technologist. If you are interested in performing human CT or PET studies, please contact the Director.

Optical Imaging User Training

Training in how to operate our Xenogen IVIS optical imaging system is available on-request. Please email BIC support to inquire about training options.

Facility Access

To gain access to the BIC Facilities in NHB or HDB please complete the BIC Access Request Form. The form should be submitted by the PI or supervisor of the individual(s) requiring access - requests from individuals unknown to BIC staff will be denied. Only legitimate requests to access Center resources will be considered.

Scheduling Scanner / Resource Time

Access to FBS - our online resource scheduling system - is included as part of the facility orientation during User Training. Instructions on how to use the system can be found in our FBS Tutorial. To gain access to FBS independent of User Training, please contact BIC support.

Additional Information

- Matlab Github
- MRI Safety Video
- IVIS Manuals
- Mock Scanner Operations Issues

Matlab Github
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You will be contacted by BIC concerning the date / time of your in-person class.

Upon successful completion of your L1 training:

6) Submit the **BACS access request form for BIC facilities**:

   Level 1 users will be granted in-hours access to BIC facilities but will not have access to the MRI scanner room(s).

   Out of hours access to the appropriate building can also be requested:

   - **NHB**: contact the building Facility Manager: Cory Konieczny
   - **HDB**: submit a request using the following form: [BA CS Request](#).

7) Submit the **FBS access request form** to obtain scheduling privileges for BIC resources.

The topics you need to understand in order to be L1 certified can be found in the L1 training checklist.

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**Level 2 Certification**: The L2 course includes a more detailed lecture on the principles of MRI, advanced MRI safety and includes training in the operation of the MRI scanner and ancillary equipment. Prior experience as a Level 1 user is assumed. Note that the Skyra and Vida systems run different software environments for MRI scanning, therefore training on the appropriate system is recommended.

Level 2 certification requires completion of the following modules:

1. Obtain Level 1 certification: prospective L2 candidate must have observed or participated in 5 scanning sessions as an L1 prior to submitting an L2 training request.
2. Attend the Level 2 training lecture: email BIC support to request a copy of our virtual L2 lecture.
3. Pass the Level 2 written exam.
4. Complete 5 hands-on apprenticeship sessions (operating the scanner) under the supervision of a qualified Level 2 mentor. These sessions can be performed on a phantom, but a minimum of 1 must be performed on a training participant to be qualified to run a human scan.
5. Submit the **L2 Certification form to BIC support** asking to sit the L2 practical exam on the appropriate MRI scanner (Skyra or Vida).
6. Pass the Level 2 Practical Exam

Successfully passing the L2 practical exam will certify that the user is permitted to operate the scanner and run MRI studies. Access to the MRI scanner room will be granted, and morphometric (fingerprint) IDs will be uploaded to the entry system.

**All human MRI studies performed at BIC require the presence of an L2 user assisted by a L1 user or another L2 user (2-person rule).**