

Training for On-Site Researchers

There are three types of training activities to be administered by the MAST Laboratory as described in the following table:

Training Plan

| Type of Activity or Materials | Content Topic | Frequency & Duration | Participants' Background |
|-------------------------------|---|-----------------------|--|
| Web Content | General Researcher Orientation for Proposal Preparation | Updated Annually | Researchers assembling proposals to use the MAST Facility as part of a NEES research project |
| Workshop | Researcher training on preparing work plans specific to the MAST Facility | Semi-annually, 2 days | Researchers with funded NEES projects for the MAST Facility |
| Workshop | On-site Detailed Facility Training | Semi-annually, 2 days | Researchers with approved work plans for the MAST Facility |

The first type of training is web-based and is intended to provide general orientation to researchers developing proposals to use the MAST Laboratory. The web-based training materials can be found on both the local MAST website and the NEES Site Specification Database:

MAST website: <http://nees.umn.edu>

NEES Site Specification Database website: <http://www.nacse.org/neesSiteSpecs/>

The second type of training is intended for researchers with funded NEESR projects for the MAST Facility. This training activity is focused on providing the researcher guidance in developing a work plan for their project to be tested within the MAST Laboratory. The purpose and key elements of the work plan are described below.

The third type of training is intended for researchers who will be working within the MAST Laboratory rather than participating remotely. This type of training will cover safety issues and operation of some of the equipment in the laboratory available for direct use by the on-site researchers (e.g., tools, instrumentation calibration equipment, etc.). Prior to using some of the on-site tools/equipment that will be accessible to on-site researchers, the on-site researchers must undergo this orientation.

Training for remote telepresence capabilities is common among all NSF George E. Brown, Jr., NEES Sites. The NEES Consortium, Inc. will cover this type of training activity.

Brief Description of Laboratory Access, Project Workplan, and Safety

The MAST Laboratory contains unique, expensive equipment. For safety reasons it is required that the operation of some of the systems be limited to a few trained individuals. Because the MAST Laboratory is funded with NSF/NEES dollars to be a resource available to researchers from around the country, the MAST Laboratory policies have been developed to balance concerns for lab safety, equipment safety, and accessibility for outside researchers.

The key element to safe and efficient use of the MAST lab is the project workplan. A detailed work plan will need to be prepared by NEES researchers and approved by the Operations

Manager prior to any project related work occurring in the MAST Laboratory. The work plan will be incorporated into the contractual agreement between the NEES researcher and the University of Minnesota for the research project and will be the governing document to control the project as it moves through the facility.

The work plan will contain detailed information concerning the individual work tasks to be performed, the duration of the tasks, the order in which the tasks are performed, identification of who will perform the tasks, and the resources required to perform the tasks. The work plan shall include:

- 1) A list of tasks to be performed
- 2) Specimen drawings
- 3) Calculations
- 4) Schedule
- 5) List of equipment, materials, supplies, tools and personnel to carry out the work tasks
- 6) An instrumentation plan
- 7) A rigging plan
- 8) Space requirements

Once activity begins in the MAST Laboratory, the NEES researcher must update the work plan weekly and submit any changes for review and approval by the Operations Manager.

The MAST Laboratory Safety Plan will be provided to NEES researchers once their project has been scheduled for the MAST Laboratory. It will also be accessible from the MAST website.

Failure to follow policies regarding safety or workplans will result in the following consequences.

- 1) First offense – verbal reminder
- 2) Second offense – written notification of out of scope work or safety violation to NEES researcher
- 3) Third offense – suspension of work and a mandatory safety review or work plan review. Results of the review will be submitted to the NEES Consortium.

University of Minnesota – MAST Laboratory Contact Information

University of Minnesota Personnel associated with the 10-year Operation and Maintenance of the MAST Laboratory are:

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|-------------------------|----------------|----------------|
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