PART I - GENERAL

1.1 RELATED SECTIONS [Note to AE: Include the sections listed below, in addition to sections to cover Coordination, Project Schedules and Warranties and Guarantees.]

   A. Section 01 33 23 – Shop Drawings, Product Data, and Samples
   B. Section 01 77 00 – Closeout Procedures
   C. Section 01 78 39 – Project Record Documents
   D. Section 01 91 13 – General Commissioning Requirements

1.2 SCOPE OF TRAINING [Note to AE: Edit this paragraph to be project-specific.]

   A. Training must include both classroom and on-the-job (hands-on) instruction by qualified manufacturer’s representatives, vendors, installation/service technicians, and operation personnel having the necessary knowledge, experience, and teaching skills.

   1. Scheduling must be coordinated and confirmed with the Owner prior to Substantial completion.

   2. In addition to respective Sections where specified, a minimum of one (1) full day of onsite classroom style instruction is required.

   3. In addition to respective Sections where specified, a minimum of one (1) full day of on-the-job (hands-on) instruction is required.

   B. The training shall provide comprehensive instruction on the operation and maintenance of building components, equipment, controls, and systems including procedures for routine startup, shutdown, normal operation, abnormal operation, preventive maintenance, troubleshooting, and corrective maintenance.

   C. All training sessions will be recorded by the Contractor if required by the Contract Documents and seven (7) copies [one copy for each O&M manual] of the recording are to be provided to the Owner at the conclusion of the training session. Format for submitted video recording (DVD) shall be determined by the Owner.

   D. Follow-up or post-occupancy training, where specified, shall be planned, scheduled and conducted per the requirements of this specification. This training will focus on seasonal issues that could not be addressed during the initial training and on addressing operational and maintenance issues identified by the Owner since turnover.

1.3 COORDINATION & SCHEDULING

   A. Training shall not begin until the following items have been completed:

      1. Building systems and equipment are complete and operational.

      2. The Owner has received and approved the final submittal copies of the Operation and Maintenance Manuals

      3. The Contractor’s proposed training plan and schedule have been approved by the Owner.

   B. The Contractor shall work closely with the Owner’s personnel and the CxA in the development and implementation of the training program. This may include preliminary meetings to map out the direction the training will take and development, with Owner approval, of the written training materials.

   C. The minimum specific hours of training time provided for each category of major equipment and systems shall be in accordance with the specification sections pertaining to this equipment or systems. Where training session duration (hours) are not provided in the
specifications, Contractors shall coordinate with the Owner for developing the hours of instruction and scope of material to be covered.

D. The Owner retains the option of redistributing training time, subject to the total time specified. This may include repetition of selected training sessions or provision for follow-up training sessions after occupancy.

E. Training must be presented on an 8-hour per day, 5-day per week schedule, with all reading assignments and review to be within this period.

F. Mutually agreeable dates for training shall be arranged with Owner, but the training shall be completed before occupancy or final acceptance.

G. Specific schedules for all training sessions must be coordinated in advance with the Owner.

1.4 TRAINING PROGRAM AND MATERIALS

A. The Contractor will submit a written training program outlining the proposed scope of training, training materials and instruction schedule for review and approval by the Owner approximately 30 days before the scheduled completion of the work for which training is to occur.

B. The Commissioning Team will provide sample training session guidelines and agendas for use by the Contractors in developing their training programs where applicable.

C. Copies of training materials furnished by the Contractor as part of their training program shall become the property of the Owner. This includes but is not limited to:
   1. All lesson plans, teachers' guides or training aids used to instruct the students. One complete set shall be given to the Owner.
   2. All written materials e.g. workbooks, manufacturers' instructions, brochures, student tests, charts or other printed or photographed visual aids. Three (3) sets with one complete reproducible master shall be given to the Owner.
   3. All audio visual materials (e.g. digital recordings). Three sets shall be given to the Owner.

1.5 INSTRUCTOR QUALIFICATIONS

A. Credentials of training instructors are subject to review and approval by the Owner.

B. Instructors must have knowledge and experience with the equipment on which they are providing training.

C. Instructors must be familiar with the organization and content of Operation and Maintenance Manuals for the equipment on which they are providing training.

D. Instructors for controls must be knowledgeable and familiar with the specific controls equipment, project applications, and specific sequences of operation for this project.

1.6 CLASSROOM TRAINING FACILITIES

A. Locations for classroom training sessions shall be coordinated and scheduled with the Owner. All training shall be conducted on-site.

PART 2 - PRODUCTS

2.1

PART 3 - EXECUTION

3.1
This section of the U of I Facilities Standards establishes minimum requirements only.
It should not be used as a complete specification.