OPERATIONS INFO
☐ O Operations Status
Beamline is in commissioning status; Lead BL Scientist must contact M Bobis-DeLong to finalize this form and provide names of trainers before using this form to train users

ACCESS
☐ F Signs and Placards
Locate and discuss all posted signs and placards (Hazard Info Placard, contact info, PPE)

☐ EB Hutch Access
Train user for Beamline Hutch Search and Secure and Breaking Security. Be aware of moving door hazards

☐ F Safety Approval Form
Users must review SAF; review controls and other training for SAF or beamline

☐ F Lead Experimenter
Lead Experimenter must ensure that safety, training, and reporting requirements are completed

EMERGENCIES
☐ F FLOCO/Control Rm
Discuss process to contact a Floor Coordinator (FLOCO) and the Control Room for assistance

☐ F Beamline Staff
Discuss process to contact Beamline Staff for assistance and operations (emergency contact info, phones)

☐ F Emergencies
Discuss where to go and who to contact during an emergency. Locate exits and fire alarm pull boxes

☐ F Emergency Lights
May come on for self-test with lights and buzzer

☐ F Eye Wash/Shower
Locate eye wash/shower

☐ F Spill Station
Locate spill control station

☐ F Emergency Beam Stop
Locate emergency beam stop buttons, discuss purpose and operation

☐ F Radiation Monitors
Identify radiation monitor locations, move away from area, call control room if area monitors sound off

☐ F Oxygen Monitors/Alarms
Locate hatch ODH monitors, discuss alarm response, verify green light is on, discuss LOB receiving room access

☐ EB Gas Alarms
Discuss any gas systems and alarms in the area, and the appropriate response to alarms

BEAMLINE EQUIPMENT
☐ F Config Control
Identify the configuration control signs and follow configuration control policy

☐ F Mezzanine Access
Access to mezzanine, areas above hut roof, staircase is not permitted

☐ F User Authorization
User is authorized to operate ONLY the equipment the user has been trained on - review operation and hazards

☐ EB User Labyrinth
Discuss proper steps and precautions to take for use of the user labyrinth

☐ B1 Electrical Outlets
Note outlet colors; do not plug equipment into sensitive or UPS outlets w/o beamline staff approval

☐ B End Station Equip
Point out Red Cables or High Voltage (HV) Supply for end station equip (do not touch)

☐ B Ergonomics
Use caution when moving around equipment and under beam pipes, changing chambers, during equipment alignment (limited space, low pipe, trip hazards, awkward positions, personnel injury, equipment damage)

☐ B CryoCooler
If cryocooler will be used, review operations for water use and shut-off valves

☐ B CryoStat
User ☐ is ☐ is not authorized to make changes to cryostat; if authorized, review operations

☐ B Detector
Review detector location, operations, hookups, cables, fill frequency, cautions for high voltage and equip damage

☐ BS Mirror
Review mirror location, operations [Grating Change ☐ Yes ☐ NA][Adjustment ☐ Yes ☐ NA ][Rotation ☐ Yes ☐ NA][Tilt ☐ Yes ☐ NA]

☐ B3 Monochromator
Review operations for energy ranges, set up, and operation of monochromator drive, motors, bearings, gas feeds, power, software; User ☐ is ☐ is not authorized to adjust monochromator

☐ B1 Optical System
Review optical system set up, operations, water gauge for optics system, mirror, camera

☐ B3 Sample Chamber
Review operations for sample chamber and mouniter; User ☐ is ☐ is not authorized to modify sample chamber or add new equipment to existing flanges (if authorized, review requirements and extension policy)

☐ B Shutters
Review location, operations, indicators, and required sequence for beamline shutter controls

☐ B Spectrometer
Review spectrometer operations and limits

☐ B2 Vacuum (End Sta Eqp)
User ☐ is ☐ is not authorized for vacuum work or bleed ups on end station equipment

☐ B Water System
Review location, indicators, alarms, trips, and operations for system and shut off

☐ B WebCam
Be aware of WebCams and/or Remote Monitoring

BEAMLINE OPERATIONS
☐ B Computer Operations
Review operations for computer operations, control software, data acquisition software, machine status

☐ B Computer Software
Do not install any computer software on beamline computers

☐ B Computer Data
Review data storage, data transfer, and back up process

☐ EB Unattended Ops
User ☐ is ☐ is not requested to attend beamline at all times, as per SAF. Discuss process

ESH & HAZARDS
☐ EB Beryllium
Identify location of beryllium articles or beryllium windows and process for notification in case of breakage

☐ EB Cryogen Fill Station
For Cryogen Filling Station, NSLS-II training and PPE required; BNL cryogen training recommended

During initial form development: If there is a number next to the designation (e.g., B1, B2, etc), select the most appropriate content.
NSLS-II Beamline Specific Training Form 2-ID  Course Code PS-BST-2-ID  Rev Date:  6/1/2018

☐ □ EB Chemistries  Discuss use, labeling, storage, spills, labs, disposal, and transportation of chemicals
☐ □ EB Cryogen Use  For cryogen/cryostat use, discuss fill operations, ODH, demonstrate use, wear PPE (eye and skin protection)
☐ □ EB Cryogen Dewar Fills  Liquid Nitrogen is filled by beamline staff only
☐ □ EB Cryogen Transfer Lines  Discuss dewar autofill process, ODH; if user is authorized to operate transfer lines, review operations
☐ □ EB LN2 Shut Off  Review operations for LN2 shutoff buttons and when to use them
☐ □ F Electrical Work 50V  No work on exposed electrical components >50V without appropriate electrical training
☐ □ EB Electrical Connections  User is not authorized to adjust any high voltage, motor connections or in-hutch beamline electronics
☐ □ EB Electrical Equipment  User is not permitted to modify or service any electrical equipment on the beamline or perform any bake-outs
☐ □ EB Electrical Breakers  In case of power failure, contact the FLOCO or Beamline Staff
☐ □ EB Electrical Pwr Supplies  Review process to check power supplies and cables; User ☐ is ☐ is not authorized to change PS; User ☐ is ☐ is not authorized to power down PS; if authorized, review operations
☐ □ EB Red & Yellow Tags  Provide information about any beamline equipment or systems that are yellow or red tagged
☐ □ EB Gas  Show location, operations, use, fills, storage of gas (inc cabinets if any), emergency response actions, and if authorized: valve operations, gas interlocks, switching cylinders, operating transfer lines
☐ □ EB Ladders  Review step ladder use if needed; if ladder required, discuss set up, safety and 3-point rule
☐ □ EB Lifting  If lifting objects <30 lbs, keep weight close to the body (between shoulders and knees); If lifting objects >/=30 lbs, use lifting and/or mechanical aids or two person lifts
☐ □ EB Magnetic Fields  Magnetic fields present at this beamline - Users with medical devices/implants should stay 1’ away from source
☐ □ EB Nano Materials  Review approved locations and controls for nanomaterial use
☐ □ EB PPE (Safety Glasses)  Safety glasses may be required inside hutch (discuss with beamline staff if required)
☐ □ EB Ventilation  Review use and operations for ventilation system and alarms, if present
☐ □ EB Food  Food consumption is permitted in designated food areas (LOBs)

LAB/Tech AREAS & SAMPLE PREP
☐ □ EB Lab Use  Discuss use of lab (including forms and PPE) and/or tech space (non-lab) area
☐ □ EB Sample Prep  Discuss location for sample prep; prepare samples only where instructed
☐ □ EB Soldering Station  Avoid skin contact with soldering iron to prevent burns to the skin; advise of process for solder scrap

WASTES
☐ □ EB Hazardous Wastes  Do not generate hazardous wastes without talking with beamline staff. Anyone generating Hazardous Waste must have Lab Standard and Hazardous Waste Generator training.
☐ □ EB Waste Location  Show relevant waste collection areas and discuss training requirements (sharps, razor blades, pipet tips, broken glass, hazardous waste Satellite Accumulation Area/SAA)
☐ □ EB Sharps  Place cover slips, tips, needles in sharps container

CLOSE OUT
☐ B1 Samples (Take Home)  Take samples back to home institution
☐ B2 Samples (Storage)  Review storage process for samples
☐ B3 Samples (Store or Ship)  Discuss with beamline staff whether to store samples or ship back to home institution and confirm before leaving
☐ B Shipping Haz Mat  Review shipping process for hazardous materials
☐ B Data Log Book  Complete entries in Experiment Data Logbook
☐ F End of Run Form  Complete the End of Run form for NSLS-II
☐ B Systems & Equip  Power down systems and turn off equipment voltages as required, perform PC security check
☐ B1 Shut Down/Secure BL  Secure beamline and inform the Beamline Staff experiment is complete
☐ B2 Shut Down/Contact Staff  Secure beamline and contact the Beamline Staff to disable the shutters before you leave
☐ F Housekeeping  Check housekeeping (beamline area neat, clean, free of hazards), recycling, tools returned or stored
☐ F Publications  Send a copy of your publication to ☑ NSLS-II User Administration ☑ the beamline

During initial form development: If there is a number next to the designation (e.g., B1, B2, etc), select the most appropriate content.
Instructions to Trainer: SAF #

Instructions to User: Trainer: Place ✓ next to your name:

1. Provide training for each checkbox to each user listed on the SAF as they arrive and complete the information below. If a checkbox does not apply, cross out that line.

   Training is valid for 1 year at this beamline only. (2) Send completed forms to NSLS-II Training, Building 745, immediately after all users listed on the SAF (who plan to arrive for this run) have been trained. Training will be entered in the user's training history.

2. Ensure your name and life number are correct and sign the space below that you understand the instructions provided to you in this training.

<table>
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<tr>
<th>PRINT User Name</th>
<th>Life #</th>
<th>User Signature</th>
<th>Date</th>
<th>Trainer's Signature</th>
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