NWS DMX Volunteer Checklist – updated September 2019   **Name:** _____

The volunteer program should provide the student with an understanding of the meteorologist position in the National Weather Service, based upon the volunteer agreement between ISU and the NWS. The best way for the volunteer to understand the NWS is to *try what we do*, after getting an overview of NWS DMX responsibilities.

The student will devote 4 hours of time for each day they volunteer (exception for the Shift Experience and Spotter Training portion). The LEAD FORECASTER is responsible for directing the student volunteer's activity, with the goal for them to complete the next item on the checklist. Please try to stick as close to the order on the checklist as possible.
- Orange highlighted cells denote items that can be completed if time permits or homework. These items may be accomplished outside of the student's normal volunteer hours.

NOTE: Testing and certificates of completion for any module requires an LMS account. Unfortunately, the NWS Central Region does not allow accounts for student volunteers.

Date Completed	Lead/SOO Initials	Task
		Each volunteer period will begin with a 15-30 minute time period for looking at the current conditions on AWIPS or the web and giving a quick briefing of the current conditions to the Lead. Move on to checklist items after the briefing/discussion of the current conditions.
		Read "About the NWS" and "Careers" pages (30 minutes) **https://www.weather.gov/about/** and **https://www.weather.gov/careers/**
		Overview of **Data Acquisition** duties (Include a Radar Check: have volunteer assist. (1 hr)
		Hydrology Program Overview (30 minutes)
		Fire Weather Program Overview (30 minutes)
		AWIPS product familiarization – Set up a separate workstation. Use CAVE to call up products to become familiar with the available data/products (1 hr)
		Project Overview: Discuss possible project to complete while volunteering w/ Mike. (1 hr)
		Overview of **Aviation Forecast** duties and software. (30 minutes)
		Review Key to TAFs/METARs (30 minutes) **S:\Student_Volunteer\Forecast Documents**
		Explain aviation forecast techniques. (i.e. assessing model data for cloud cover/height, wind speed/direction, fog, wx, etc.) (1 hr)
		Work with the **Aviation Forecaster** to compose a draft set of TAFs for DSM in AvnFPS. (1 hr)
		RWS Overview: Volunteer drafts a RWS. Issue immediately or save the product as WRKRWS for use in the next operational issuance. **Volunteer may append their initials.** (1 hr)
		Weather Story/Social Media – Design a weather graphic about a current weather story. Use PPT or Venngage and send via Twitter/Facebook. (1 hr)
		Wirecast recording: Discuss the social media post/upcoming wx impacts in a recording. Have the student prepare a recording using training instructions **https://bit.ly/2m0dBvT** (1 hr)
		Forecast Builder Demonstration Module (15 minutes) **https://www.youtube.com/watch?v=XTBb-SzXNbY&feature=youtu.be**
		GFE Overview: Set up a separate workstation with GFE in "PRACTICE MODE." Run FB to populate grids for days 1-3. Show some of the main ways to edit grids (ESTF, populating, pencil tool, other tools, etc. Have student practice using GFE to edit forecast grids for the next 12 hour period. Use Forecast Builder as needed. Review/discuss results. (1.5 hrs)
		Storm Survey – DAT Overview (1-2 hrs) Have the student practice using the DAT for a storm survey. Instructions at **S:\Training\Convective\2017\Training2017DATOperation.docx**
		Storm Survey EF Scale Overview - Use the EF ToolKit to rate tornado damage. (1 hr) Use storm survey pictures from actual survey on July 19, 2018 in the Case Studies folder.
		Forecast Builder Demonstration Module (15 minutes) **https://www.youtube.com/watch?v=XTBb-SzXNbY&feature=youtu.be**
		Discuss forecast and model analysis techniques for determining model initialization (30 minutes)
		Discuss forecast & model analysis techniques for Temperature and Dew Points. (30 minutes)

		Set up a separate workstation, place GFE in practice mode. Student will prepare forecast grids for the next 24-48 hours of temperatures and dew points using AWIPS. (1.5 hrs)
		Discuss Bufkit uses and operation regarding winds/wind gusts. (30 minutes) Can use the following site to help explain... **https://www.weather.gov/ict/windtools**
		Discuss forecast & model analysis techniques for Wind, Wind Gusts and Sky. (30 minutes)
		Discuss forecast & model analysis techniques for precipitation forecasts. Where will it precipitate?, how much precipitation?, frontogenesis/PV anomalies, etc. (0.5-1 hr) **https://www.weather.gov/media/lmk/soo/frontogenesis_lmk2.pdf (Slide 13, 14, 25 and 27)**
		Set up a separate workstation, place GFE in practice mode. Student will prepare forecast grids for the next 12-24 hours of wind, wind gusts, sky, & pop using GFE and AWIPS. (1-1.5 hrs)
		Top Down Precip & Bufkit Review (1 hr) **S:\Student_Volunteer\Forecast Documents**
		Top Down Sounding Exercise (30 minutes) **S:\Training\Winter\2013\PtypeSoundingExercise** (See "How to use" instructions in the folder)
		Winter GFE Precip Forecast/Case Study (1.5 hrs) Winter GFE/FB Job Sheets: **S:\Student_Volunteer\Winter WES\FB_JobSheetTraining.pdf**
		Winter WES case: November 2017 Winter forecast case. **Complete with Mike.** (2-4 hrs)
		Convective WES Prep: Storm Interrogation Strategies PowerPoint (1 hr) Located at: **S:\Student_Volunteer\Convective_WES\Storm Interrogation Strategies.ppt**
		Convective WES Prep: Supercell characteristics (30 minutes) **https://youtu.be/GtRSw6uK28Q**
		Convective WES Prep: Severe WX Parameters (1 hr) **http://training.weather.gov/wdtd/courses/rac/severe/parameters/story_flash.html**
		Convective WES Prep: Storm-based Warnings Overview – (15 min) Watch Slides 7-14 only: **http://training.weather.gov/wdtd/courses/rac/warnings/sbw-considerations/presentation.html**
		Homework: Review handout (Briefly scan as interested, do not need to read whole document) **http://training.weather.gov/wdtd/courses/rac/documentation/rac18-severe.pdf**
		Homework: Review handout (Briefly scan as interested, do not need to read whole document) **http://training.weather.gov/wdtd/courses/rac/documentation/rac18-warn-method.pdf**
		Convective WES Scenario – Complete a WES scenario to gain near-storm environment detection, radar interpretation and warning generation skills. **Complete with Mike.** (4 hrs)
		FFMP Overview Module (30 minutes) **https://www.youtube.com/watch?v=qQYjx-3v0_U&feature=youtu.be**
		FLASH Model-Derived Products Module (15 minutes) **http://training.weather.gov/wdtd/courses/MRMS/lessons/FLASH-products/Model-Derived/story.html**
		FLASH Comparison Products Module (15 minutes) **http://training.weather.gov/wdtd/courses/MRMS/lessons/FLASH-products/Comparison/story.html**
		Set up a separate workstation in "PRACTICE MODE", have student check out the FFMP, FLASH products, and ARI values. (1 hr)
		Set up a separate workstation in "PRACTICE MODE", have student check out site specific and Hydroview. (1 hr)
		NWS Hiring Process Overview – Learn where to look for NWS jobs, what materials are needed for an application, receive a description of different NWS positions, and how to apply for a NWS Pathways or Intern position. (2 hrs)
		Mock Job Interview – **Instructions on Training page, click "Student Volunteer Items"** (0.5 hr)
		Volunteer Experience Summary: Student will give a 5 minute presentation or write a 1 page paper on what they have learned and how their experience will apply to their future career goals. (*Paper to be submitted or presentation given on the last day of volunteering.*)
		Review Media Interview Tips - https://virtualspeech.com/blog/media-training-tips-for-great-interview (30 minutes)
		Watch Video About Sound Bites - https://www.youtube.com/watch?v=FjR8fNvY8_E (10 min)

		Mock Media Interview (1 hr) – **Instructions at S:\Student_Volunteer\Media Training**
		Severe Weather Operations – Observe a severe wx or winter wx operation. SOO/LF may initiate direct shadowing of severe weather duty positions, if the situation allows.
		Storm Survey – Student may accompany staff on a storm survey
		Midnight Shift Experience – Student will perform routine Midnight Shift Duties under supervision of the LF. Student will complete the 06Z observation, daily climate, Fire Weather, RWS, HWO and Weather Story. (6-8 hrs)
		DATAC Shift Experience – Student will come in and work one full DATAC shift helping complete all required shift duties. (6-8 hrs)
		Spotter Training: Student will accompany staff to a spotter training class. (4-6 hrs)