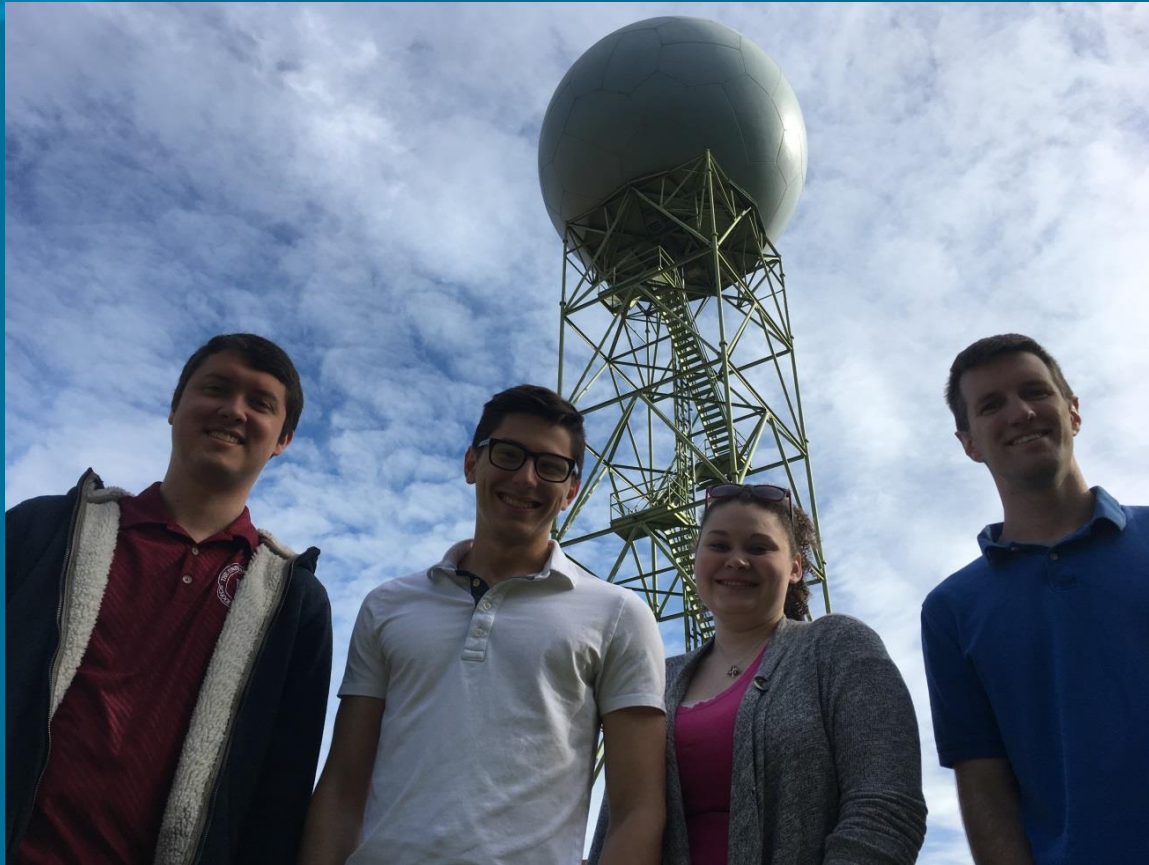


MEAS 498 / 598 Orientation



2018 Spring/Summer class at the krax WSR-88D

Jonathan Blaes, Ryan Ellis, James Morrow

Intro Activities

- Welcome and Introduction
- Safety
- Parking
- Requirements and Expectations
- Logistics
- Syllabus and web site
- Shift Scheduling
- Outreach Trips and Special Sessions
- Journal
- Wrap up

Welcome

- Part of an established relationship between NC State and the NWS Raleigh stretching over 3 decades.
- Course is now in its 15th year.
- Participants have a history of success.
- Since the late '90s more than 35 former NWS – NCSU Student Interns have been employed by NWS/NOAA

NOWCAST

CAREER DEVELOPMENT

**EXPANDING HORIZONS WITH AN
NWS INTERNSHIP COURSE**

BY MICHAEL J. BRENNAN, KERMIT KIETER, ALLEN J. RIORDAN, AND GARY M. LACKMANN

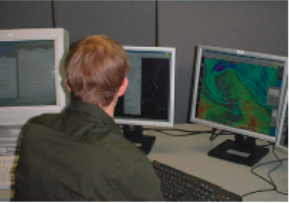
Meteorology students at North Carolina State University (NCSU) participated in an experimental internship course during the spring of 2004 that allowed them to gain an operational perspective on meteorology by experiencing the everyday duties of the staff at the collocated National Weather Service (NWS) Weather Forecast Office (WFO) in Raleigh. The course was designed to meet several goals, which included allowing students to contribute to operational forecasting, gain proficiency with routine NWS duties and software tools, and sample the broad array of work performed by the NWS. Students also were exposed to operational meteorology and NWS careers and received assistance in pursuing such a career.

During the semester, five senior undergraduate and five graduate students enrolled in the course. They attended NWS training sessions, "shadowed" NWS staff, performed routine NWS duties, and assisted NWS staff during high-impact weather events. Overall, the students and NWS staff were decidedly positive about the course, which was again offered during the spring of 2005.

As the field of atmospheric science continues to advance and diversify, courses of this type can play an increasingly vital role in education and professional development. In describing the new course, we hope to encourage others who may be contemplating a similar program, especially since many WFOs are located on college campuses, an arrangement that makes this type of experience feasible.

The internship course was a natural extension of the 17 consecutive years of NOAA A-funded collaboration between NCSU and the Raleigh WFO, which moved to the NCSU campus in 1994. The course was designed for students interested in an NWS career. The hands-on experience should help students decide whether an NWS career is something they might wish to pursue. Secondly, the course provided experience that will be invaluable when they apply for an entry-level NWS position.

Students were selected for the course by the evaluation of a written statement of interest by NWS personnel and an interview with the NWS science operations officer and other NWS staff. The course required students to work at least 16 hours alongside NWS personnel performing routine shift duties and to maintain a journal documenting their experiences. Students initially observed NWS personnel during their shifts and gained experience with manual analysis of surface and upper-air maps, composing the state weather summary, and gathering and disseminating climate and hydrological data. With time, students became independently proficient with these duties. In addition, the students traveled to NWS equipment sites and attended special sessions for hands-on experience with the Advanced Weather Interactive Processing System (AWIPS), seasonal familiarization with severe and winter weather forecast problems, office safety, and applying for NWS jobs.



NCSU student Tom Green at an AWIPS workstation.

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DOI: 10.1175/BAMS-86-10-1407

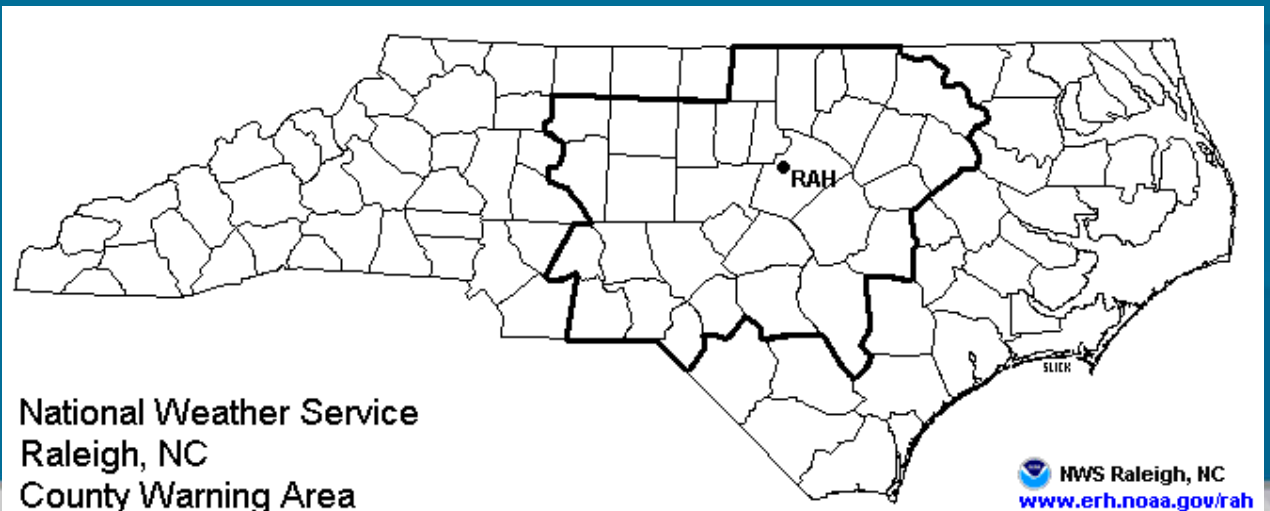
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OCTOBER 2005 8615 | 1407

WFO Raleigh

- Why we are here on campus at NC State
- Staff members overview
 - 3 Managers (SOO, WCM, ESA) *1 vacant MIC*
 - 5 Lead Forecasters
 - 4 General Forecasters (*1 vacancy*)
 - 3 Meteorologist “Interns”
 - 5 Support Staff (ITO, OPL, ET’s, ASA)
- Lead forecasters run the day to day operations



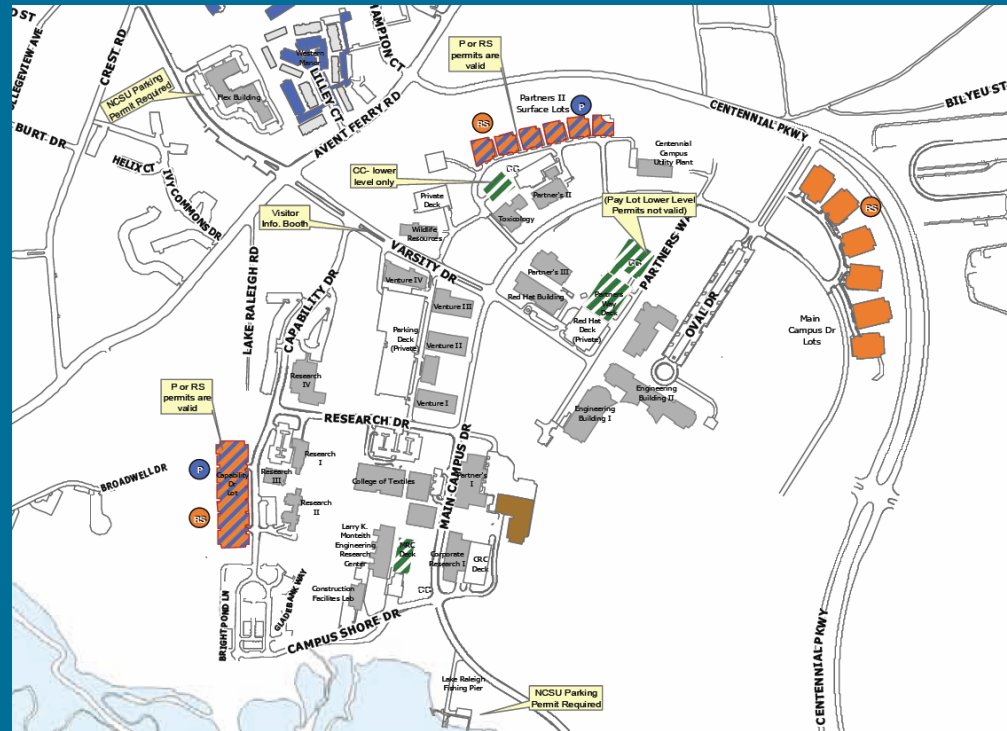
National Weather Service
Raleigh, NC
County Warning Area

Safety

- Need to sign in when you enter the office
- Notify the Lead Forecaster when you exit the operations area
- Two fire exits
- Tornado shelter
- Rendezvous location
- Dial “911” in an emergency
- Beware of equipment room

Parking

- Your responsibility
- Utilize the busses!
- We can walk you to your car at night if needed (Just ask!)
- Can't help you out with your tickets



Pay Lot

Student Lot

Capability Dr

Capability Dr

1005 Capability Dr



Requirements

To receive course credit, students must:

- Complete the DOC Security items
- Complete the NOAA IT Security and NOAA Safety training
- Complete the AWIPS training job sheets
- Complete the assigned online training courses
- Log at least 24 hours at the NWS office, working at least one of each unique shift.
- Participate in at least three special sessions/field trips.
- Participate in at least two outreach or presentation activities
- Maintain a personal daily journal of your experience. This record will be submitted every other Friday for periodic review.
- Meet educational and professional expectations

Expectations

- You will be working in a professional environment.
- Dress appropriately, do not wear shorts, T-shirts or flip flops (business casual)
- Do not use government computers for non-intern related or leisure activities
- The shift supervisor has the ultimate responsibility for you and all other operational personnel; follow his/her directions unless he/she has delegated your activities to another on staff; do not leave the operational floor without informing the shift supervisor or his/her designee.
- Tours of the office for your family and/or friends are welcomed but must be approved in advance.
- Call the office and ask for the lead forecaster if you can not make your assigned schedule; do not give this number to others except those designated as an emergency contact.
- Do not come to the office for intern activities that are not scheduled in advance

Other Opportunities

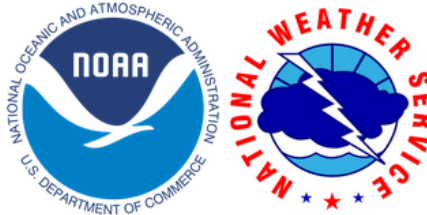
- Excluded from the required operational shifts, there will be opportunities to participate in **routine duties during major weather events** such as winter storms or convective outbreaks. Students are to check emails and read the local Area Forecast Discussions each day to keep abreast of possible events so that they are prepared for possible participation.
- Although not required, it is hoped that students will take full advantage of the opportunity to learn about NWS activities and participate in them as much as is practical. Additional activities such as participation in **staff research projects** will also be made available based on student availability and interest.

Logistics

- Access to building at night/weekends is limited, you will need to call the office after 5pm and on weekends/holidays for access.
- You must ring the office's door bell to gain admittance and then sign in; you will not have access to the code for the office entry which periodically changes.
- If the university officially cancels classes, students are not required to participate in NWS activities.
- Routine or job shadowing duties as well as special sessions are subject to changes and cancellations, pending NWS's work load and priorities.
- Students will need to provide availability via our online spreadsheet, which will be used to schedule shifts along with special sessions and field trips.
- The intern's routine schedule will be updated on the online spreadsheet, sent to you via email, and posted in the operations area.

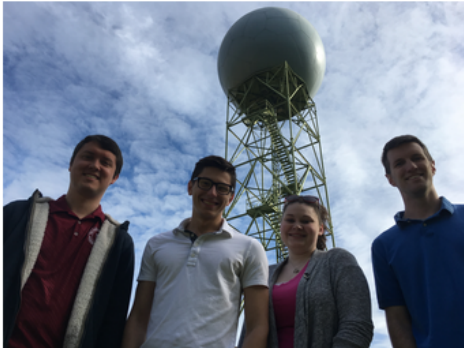
Web Site

<https://www.weather.gov/rah/student>



MTR 498/598

NC State/NWS Intern Course



This is an internship experience at the Raleigh National Weather Service (NWS) Office for meteorology majors interested in a career in operational weather forecasting. Activities include job shadowing, weather analysis, development of area forecast discussions, weather and storm summaries, seasonal familiarization sessions, site visits, and participation in routine shift operations of the NWS.

Learn more about this experience by viewing our latest Newsletters:

[Spring 2018](#), [Summer 2018](#)

Course Description | **Orientation Power Point** | [NWA Conference Poster on the NC State/NWS Raleigh Internship](#)

Shift Options | **Outreach Opportunities**

How to Access Required and Optional NWS Training Materials

Shift Scheduling

- **Step 1:** Fill out your availability in the Shift Availability Spreadsheet (ASAP), and keep it as updated as possible as events crop up throughout the year.
- **Step 2:** Email notification by Friday the week before
- **Step 3:** Arrive on time for your shift. Call the office if you are unable to make your shift the day of, and notify Jamie/JB/Ryan via E-mail to attempt to re-schedule (Emergency Only)

Course Duties - Shifts

NCSU/NWS Student Intern Schedule Options

Interns begin their routine duties by rotating into the level 1 activities (HMT/Intern).

By Mid-Term, they will begin to rotate into level 2 activities (Job Shadowing Forecasters).

SHIFT	LEVEL 1 INTERN DUTIES
H (7:30 AM - 9:30 AM - HMT)	Hydro Data - R1/RR3 - Reservoir Levels - Coop Summary - Observation QC NOAA Weather Radio - RTP Product - Climate Update - 12 UTC analysis
K (10:00 AM - 12:00 PM - HMT)	River Lake Summary - Weekly Radio Test (Wed) - Radar Check - QC NOAA Weather Radio Update WRKSYN - 15Z Surface Analysis
R (4:00 PM - 6:00 PM - HMT)	QC NOAA Weather Radio - Afternoon Climate - Radar Check - Update WRKSYN 21Z Surface Analysis
SHIFT	LEVEL 2 INTERN DUTIES
J (9:00 AM - 11:00 AM - FORECASTER- H)	Near Term Update - Mock AFD, GFE, Collaboration
L (11:00AM - 1:00 PM - FORECASTER - I)	Extended Forecast - Mock AFD, GFE, Collaboration
R (4:00 PM - 6:00 PM - FORECASTER - Q)	Fire Weather Forecast - 21 UTC analysis
T (6:00 PM - 8:00 PM - FORECASTER - Q)	Aviation Forecast - 00Z TAFs, AFD, 00 UTC analysis
V (8:00 PM - 10:00 PM - FORECASTER - R)	Evening Public Forecast Update, Mock AFD, GFE, Collaboration, Upper air analysis

Required Training

- Most of the training is located within the Department of Commerce Learning Center (CLC) also known as the Learning Management System (LMS) <https://doc.learn.com/noaa/nws>
Should have received an email with login information already
- The NOAA IT Security and NOAA Safety Training is on a different web site
<http://noaa.learnsecuritywith.us/access/login.asp>
<http://ns.learnsecuritywith.us/access/login.asp>

Outreach Activities

- Lots of options (especially in the Spring)
- Need to participate in at least 2, can do it together assuming enough space to attend.
- Listed in:
 - Operations area on clipboard
 - Via google calendar

Outreach Activities

Send a note to Jonathan or Brandon if you are interested and we'll put you in touch with the right contact.

February 9 (900 AM – 200 PM)

BEST Business Safety Conference

Raleigh - booth in the McKimmon Center

February 18-20 (1200-800 PM on 2/18, 1000 AM – 700 PM on 2/19, and 1100 AM- 500 PM on 2/20)

Boat Show

Raleigh - State Fairgrounds

March 10 (700 PM)

SKYWARN Training

Cary - Bradford Hall at the Carolina Preserve

April 9 (900 AM – 500 PM)

SKYWARN Training Day

Raleigh - NC Museum of Natural Sciences

May 21-22 (900 AM – 500 PM)

Astronomy Days

Raleigh - NC Museum of Natural Sciences

June 18 (900 AM – 500 PM)

StormFest

Raleigh - NC Museum of Natural Sciences

Other activities, mainly Skylar training presentations will be posted at

<http://www.erh.noaa.gov/rah/skywarn/>

If the students are free and wanting to take a trip to New Bern, the P3 Hurricane aircraft will visit MCAS Cherry Point on May 4th.

Course Duties - Special Sessions

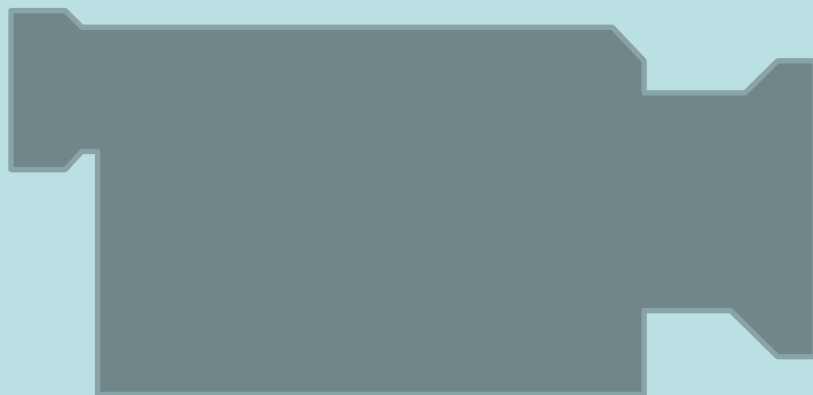
- Seasonal Familiarizations (Spring - Severe Weather)
- Off site visit – NWS KRAX Radar
- Off site visit – ASOS/AWOS, Hydro Site, COOP site
- Off site visit – GSO Upper-Air
- Severe weather simulation on the WES
- Various Outreach Opportunities (Boat show, Skywarn presentations, School visits...etc.)
- NWS job application primer

Journal

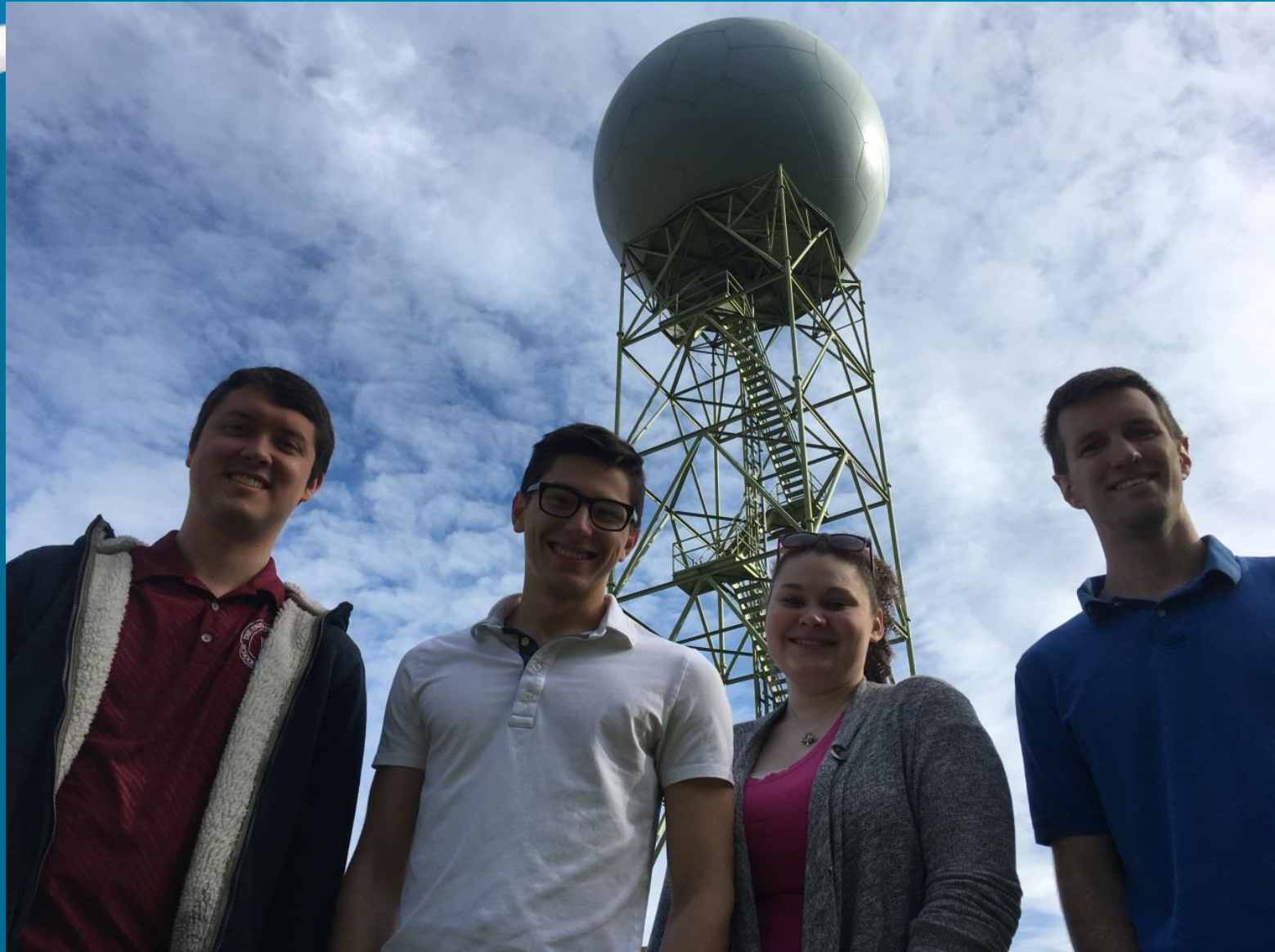
- The course requires that you keep a succinct journal of your weekly intern activities and impressions. The activities can simply be listed while your impressions should be highlighted via a short narrative.
- Keep journal via shared Google Sheet and send an e-mail informing the following people when each two week entry has been updated. james.morrow@noaa.gov, ryan.ellis@noaa.gov, gary@ncsu.edu, and Jonathan.Blaes@noaa.gov
- In the journal entry, please include who you worked with, what you did, what you learned.
- Be open and honest about your impressions.

Wrap up

- This course will become what you make of it
- Update your availability on the spreadsheet (ASAP)
- Provide us with a time and date to complete your AWIPS familiarization worksheet
- Complete the NOAA IT Security and NOAA Safety training before your AWIPS familiarization session.
- Begin reviewing the AWIPS Familiarization and other training handouts listed on the website.
- Feel free to see Jonathan if you have professional or career questions.



Radar Field Trip



GSO Upper-Air Trip

