AMS Board on Higher Education

Thursday, October 13
3:45-4:15pm MT
Wendilyn Flynn, BHE Chair
(she/her/hers)

Summary of Ongoing Projects & Discussion
BHE: 16 Members

3-year terms

- **Wendilyn Flynn** – Chair (UNCo)
- **Stephen Bennett** (Demex)
- **Jeremy Berman** (U Albany)
- **Rick DiMaio** (Loyola Univ)
- **Zak Handlos** (Georgia Tech)
- **Alicia Klees** (UIUC)
- **Robert Loughman** (Hampton Univ.)
- **Esther Mullens** (Univ. FL)
- **John Ogren** (NWS, Chief Education Officer)
- **Albert Owino** (Western CT State)

- **Tony Praino** (IBM)
- **Val Sloan** (UCAR/NCAR)
- **Alan Srock** (SCSU)
- **Robin Tanamachi** (Purdue)
- **Dave Vollmer** (UCAR/COMET)

Student Members:

1-2 year terms

- **Mariama Feaster** (Graduate Student, UAH)
- **Nathan Cantu** (Undergraduate Student, CoD)
Apply to become a BHE Member, or nominate someone!

Open through Nov 1

Volunteers are an essential and valuable part of AMS. With the help and support of boards and committees, local chapters, journal reviewers, and many more, AMS is able to promote the advancement of the atmospheric, oceanic, hydrologic, and related sciences to the weather, water, and climate community and be many ways to volunteer your time:
Dynamics Survey Team

- Mathew Barlow
- Wendi Flynn
- Casey Davenport
- Zak Handlos
- Alicia Klees
- Esther Mullens

- Target Audience: US Undergraduate Atmospheric Dynamics Instructors
- 2021: Group re-organized, focused efforts, enlisted Sharon Kristovich (AMS) – Reporting and Data Analytics Manager
  - Formulated questions, pilot-tested, re-arranged questions
- Survey Distributed Spring 2022

Data collected:
- Demographics (type of position, type of program, student outcomes)
- Resources, teaching methods, depth of coverage of topics (quantitative/quantitative)
- Attrition at detailed content questions

117 participants
~73 responses

Two abstracts at 2023 AMS Annual Meeting

GOALS: Publish results in BAMS, establish learning community (via AMS)
Most Commonly Required Textbooks (N varies)
• An Introduction to Dynamic Meteorology (Holton & Hakim 2012) (38.0%, 27/71)
  Midlatitude Atmospheric Dynamics: A First Course (Jonathan Martin 2006) (32.9%, 23/70)
• Midlatitude Synoptic Meteorology (Lackmann 2021) (15.7%, 11/70)

How much influence the NOAA GS-1340 has on requirements:
• “big” (38.9%; 28/72) or “some” (29.2%; 21/72) influence on the material covered within this
course (though not all in the community are convinced this is the best way moving forward...)

Other questions:
• Physics, Meteorology course prerequisites
• Does your course have a lab component? Programming?
• How long do you spend on ___ topic? [Sliding Scale]
• Do you cover ___ topic in a qualitative or quantitative way? [Sliding Scale]
Dynamics Survey Team

Not BHE, but related!
NAGT Earth Educators’ Rendezvous 2023

Teaching Atmospheric Dynamics to Improve Learning and Engagement
Thursday | 1:30pm–4:00pm | Appleby 3

Conveners

John Knox, University of Georgia
Casey Davenport, University of North Carolina at Charlotte
Zachary Handlos, Georgia Institute of Technology–Main Campus
ASER: Atmos Sci Education Research

- Dawn Kopacz
- Lindsay Maudlin
- Wendi Flynn
- Casey Davenport
- Zak Handlos
- Peggy McNeal

- BAMS Special Collection Initiated
- ASER Sessions at Conference on Education at AMS Annual Meeting
- Communities: AMS Community, Listserv
- ASER landing page on AMS Website

GOALS: Increase visibility of ASER; Build & support ASER community
To build a greater support network and provide more resources for early career faculty, Dr. Klees worked with AMS Board for Early Career Professionals to organize (and moderate) a Sept 2022 webinar panel discussion on surmounting common challenges in the first few years of a faculty position.

Next (grassroots) step: Dr. Klees will organize a Slack group or listserv to encourage peer mentoring and support between early career faculty.
Join the Board for Early-Career Professionals for a free webinar:

**Early Career Challenges for Higher Education Teaching Entrants**

29 September 2022
12PM Eastern Time
ametsoc.org/WebinarEntrants

Alicia Klees  
University of Illinois

Alexandra Anderson-Frey  
University of Washington

Gary Lackmann  
NC State University

Alan Srock  
St. Cloud University
AMS Student Conference Planning Activities

Student Conference Planning Committee (SCPC):
Agenda/speaker line-up for the 2023 Student Conference is drafted, with an emphasis on enhancing networking opportunities and hybrid accessibility

First professional development webinar organized by AMS SCPC (moderated by Dr. Klees) will focus on tips for applying to graduate school and will be held in November 2022

AMS SCPC student co-chairs + faculty co-chairs, AMS Commissioners, and other AMS representatives have been developing the initial AMS Board of Student Affairs
  • Well-deserved recognition of the incredible, huge amount of work students do for the AMS community in planning the Student Conference + otherwise!
  • Terms of Reference approved in July 2022 by AMS Council
Join the Board on Higher Education for a free webinar:

Graduate School Applications: Marketing Yourself for Graduate School

9 November 2022
1PM Eastern Time
ametsoc.org/GraduateSchool
Building connections with 2YC

- Tony Praino
- Maura Hahnenberger
- Matthew Lazzara
- Esther Mullens

**Impetus:** February workshop on Strengthening Engagement between Disciplinary Societies and Community Colleges (Feb 2022)

**Working Group Focus Areas**
- Outreach to 2YCs - faculty, students, staff
- Promote education research focused by, about, for 2YCs

**Student-focused:**
- Address student career development, transfer to four-year institutions, and workforce connections (e.g., discipline-specific materials and resources for careers, transfer, workforce)
- Engage more CC students in undergraduate research
- Connections specifically designed for the two-year student

**Faculty-focused:**
- Identifying additional AMS opportunities for engagement of 2YCs and connection to other AMS boards, committees, and functions
- Professional development for 2YC faculty
- Engage and support the specific needs of adjunct faculty
- Provide opportunities for discipline-based professional development for 2YC faculty
**Lorenz (Teaching Excellence) Award**

- Wendi Flynn – Chair
- Karin Ardon-Dryer
- Lis Cohen
- Mariama Feaster (student)
- David Vollmer
- Don Conlee (prev Award Recipient)
- Robin Tanamachi

The Edward N. Lorenz Teaching Excellence Award is to be given annually to an individual in recognition of sustained outstanding teaching and mentoring at the undergraduate and/or graduate or post-doctoral levels and the impact this individual has had on students.

- Nomination Packages due by May 1, 2023
  - Nominate your colleagues!
- Award for academics in a college or university setting
- Use award verbiage to discuss each package: *teaching* and *mentoring*
- Packages valid for 3 year period!

This year’s winner (already announced): **Paul Sirvatka**

For lifelong, impactful education and mentoring of diverse learners, and for trailblazing and championing experiential learning, innovative curriculum, and accessible data visualization

For lifelong, impactful education and mentoring of diverse learners, and for trailblazing and championing experiential learning, innovative curriculum, and accessible data visualization
Mind the Gap 2
(ongoing project into 2024)
*survey*

Bachelor’s Degree Information Statement Revision
(timeline: Draft by Jan 2023 final form March 2023)
*survey*

Dynamics Survey
(ongoing project into 2023)
*survey*

Best Practices: Preparing Students for the Private Sector
(timeline: draft Summer 2023)
*survey in development*
Mind the Gap 2

- Not BHE work!
  - Workshop held at SUNY-Albany in June 2022
  - Planned w/COMET: scenario-based training modules; Video interviews

- Stephen Bennett, The Demex Group
- Heidi Centola, The Weather Company
- Victor Gensini, Northern Illinois University
- Sue Ellen Haupt, NCAR
- Andrea Lopez Lang, SUNY Albany
- Max Vido, ACES Power
Best Practices: Preparing Students for the Private Sector

• Alicia Wasula – Chair
• Stephen Bennett
• Dan DePodwin
• Wendi Flynn
• Tom Guinn
• Timothy Hall
• Brent Shaw
• Lance Steele
• Douglas Stolz
• Tony Praino

• In development!
• Focus on skills – “soft skills” and career skills
  • No recommendations that would create new required courses, or dilute rigor
  • Six Areas: Communication, Group Work, Programming/Coding, Time Management, Problem Solving
• Academic levels considered: incoming freshmen through graduate school
• Informed by MtG survey, Dynamics Survey
• Survey planned for targeted distribution to hiring managers in the Private Sector

GOAL:
Develop Best Practices Statement on Preparing Students for the Private Sector by Summer 2023
→ A supplement (not Appendix) to the AMS Bachelor’s Degree Information Statement
Best Practices: Preparing Students for the Public Sector

Just beginning!

White Paper will be in development soon...
Bachelor’s Degree Information Statement Revision

• New perspective: guidance document – with links!
• Develop revisions in-step with other initiatives (Mind the Gap, BP on Preparing Students for Private Sector, Dynamics Survey)
  • Avoid duplication of effort
  • Ensure agreement between documents in-construction
  • Use survey results and conclusions from other initiatives
• Use our community-wide survey results

GOALS:
Have draft ready to present at a Town Hall Meeting at 2023 AMS Annual Meeting
Final Form online by March 2023
Bachelor’s Degree Information Statement Revision

- Current structure will most likely not change
- Ensure alignment with other AMS statements
- Updates to:
  - Diversity, Equity, and Inclusion
  - ASER
  - Remote Learning
  - Climate Change
  - Learning Outcomes
  - Private Sector – skills
- Survey Results
  - Analysis in-progress:

- Zak Handlos – Chair
- Stephen Bennett (MtG, BP)
- Wendi Flynn (BP)
- Jana Houser
- Andrea Lang (MtG)
- Steve Nesbitt
- John Ogren
- Tony Praino (MtG, BP)
- Alan Srock
- Loren White
Bachelor’s Degree Information Statement Revision

- Survey results:
  - 294 responses
    - Optional, paragraph responses ~100
  - Significant attrition at Question #4
  - Disaggregate by Affiliation
    - Private, Government, Academia, Student, Federally Funded R&D, Not-for-profit or retired
    - Includes students

Question #4: What are the core aspects of undergraduate education for meteorology and atmospheric sciences majors pursuing any meteorology-related career (e.g. courses, extracurricular experiences/internships, DEI issues, job skills, etc.)?
Bachelor’s Degree Information
Statement Revision

Question #5: What additional competencies or electives within an undergraduate curriculum would be most beneficial for specific meteorology or atmospheric sciences-related careers (e.g., government, broadcast, energy, agriculture, data analytics, academia)?

Survey results:
- Question #5 responses in line with Mind the Gap survey, Best Practices for Preparing Students for the Private Sector work
- Who responded?

Select the affiliation that best describes you:

- Private (Consultant, Broadcasting, Media etc.), 20.2%
- Government (Local, Regional or National), 22.3%
- Academia (Faculty, Research, Staff), 31.9%
- Student (Undergraduate, Graduate), 14.4%
- Other (please specify), 1.7%
- Retired, 4.1%
- Not-for-profit, 1.7%
- Federally Funded Research and Development Centers (FFRDC), 4.1%
Accreditation

• Has been focus on this at past Members Meetings, H&C Meetings, including ABET presentation (2018)
  • Engineering programs may be model
  • Weighed pros/cons

• No consensus; specter of cost and time commitment

• Pressure from administration?

• Base on AMS Bachelor’s Degree Information Statement

• External program reviews already occur

• Action on our part may mean we have control over process

• Alan Srock
• Tony Hansen
• Can we arrive on some RESOLUTIONS for action? Ideas for the next Members Meeting or Heads & Chairs Meeting, action items for AMS?

• What initiatives would you like to see the BHE develop further, or take on?

• What ever happened to the “Curricula” – online information about programs?

Google Form: Questionnaire about today’s meeting and suggestions for future H&C Meetings

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