

NSF LSAMP National Coordination Hub (NSF LSAMP-NCH): Mentoring Institute
2025 Mentoring Institute Webinar Series

The Development of a Mentoring Program

Dr. Louis Dale & Dr. Mary Braswell
March 21, 2025



NSF LSAMP
NATIONAL COORDINATION HUB

Webinar's Outline

Welcome and Introductions

- Dr. Chris Botanga
- Dr. Ben Flores

The Development of a Mentoring Program

- Dr. Louis Dale

The University of Alabama at Birmingham ALSAMP Mentoring Program

- Dr. Carolyn Braswell

Closing Remarks

- Q&A and Open Discussion
- Evaluation
- Contact Information

NSF LSAMP NATIONAL COORDINATION HUB (NSF LSAMP-NCH): MENTORING INSTITUTE

2025 Mentoring Institute Webinar Series

The Development of a Mentoring Program

A WEBINAR BY:
Dr. Louis Dale
and
Dr. Carolyn Braswell

March 21, 2025


9:00 AM HAST - 10:00 AM AKST - 11:00 AM PST - 12:00 PM MST - 1:00 PM CST - 2:00 PM EST

The webinar will briefly discuss the development of the Alliances for Minority Participation Program, the concept of mentoring, and NSF's involvement in mentoring across the sciences and educational systems. Additionally, the webinar will draw from the many years of a highly successful mentoring program at the University of Alabama at Birmingham, dovetailing into the selection of faculty mentors and the evaluation of mentoring programs.

Welcome remarks by:
Dr. Chris Botanga (CSU)
PI & Project Director, NSF LSAMP-NCH



Hosted by:
Dr. Benjamin Flores (UTEP)
Co-PI, NSF LSAMP-NCH

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Dr. Louis Dale is Professor Emeritus of Mathematics and former Vice President for Equity and Diversity at The University of Alabama at Birmingham. Dale received his Ph.D. degree in Mathematics from The University of Alabama and served as Professor of Mathematics, Associate Dean and Associate Provost. He served as Principal Investigator in the original NSF Alliances for Minority Participation (AMP) program established in 1991 and as Principal Investigator of the NSF Alliances for Graduate Education and the Professoriate programs established later. Dr. Dale is the recipient of two White House Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring.

Dr. Carolyn Braswell is an Associate Professor of Education and former Associate Vice President for Equity and Diversity at The University of Alabama at Birmingham. Braswell received an Ed.D. in Education from the University of Alabama. At UAB she has been the Co-Principal Investigator Director for the Louis Stokes Alliance for Minority Participation (LSAMP) program; the Alliance for Graduate Education and the Professoriate (AGEP) and the Bridge to the Doctorate (BD) and the ADVANCE programs. Dr. Braswell is a shared recipient of the White House Presidential Institutional Award for Excellence in Science, Mathematics, and Engineering Mentoring.



Christopher Botanga, Ph.D.



- Professor of Genetics & Genomics, **ILSAMP Alliance** PI, Executive Director at the Center for STEM Education and Research (CSER) at Chicago State University (CSU), and PI of the **LSAMP National Coordination HUB**.
 - Ph.D. from the University of Virginia. Current research in his lab employs a variety of functional genomic platforms including molecular biology, bioinformatics, epigenetics, and both forward and reverse genetics to understand the mechanism of host-pathogen interactions involved in a battery of defense responses mounted by plants to ward off pathogens.
 - He has authored and co-authored several peer-reviewed journal publications and presentations at local, national and international conferences on topics of genetics, biosynthetic genes, and genomics.
- Prior to joining CSU, Dr. Botanga was a Post-doctoral Associate (genetics and genomics) at the University of Minnesota, Twin Cities, and Assistant Professor of Biology at Augsburg College, Minneapolis.

Benjamin C. Flores, Ph.D.



- Professor of Electrical and Computer Engineering at the University of Texas at El Paso. Currently serves as PI and Director of the **UT System LSAMP**, Co-PI of UT System's **AGEP**, and Co-PI of the **LSAMP National Coordination HUB**.
- Ph.D. in Electrical Engineering from Arizona State University. B.S. and M.S. in Electrical Engineering from UTEP.
- Served as Dean of the Graduate School, Associate Dean of the College of Engineering, and Chairman of the Department of Electrical and Computer Engineering at UTEP.
- Recipient of the Texas STAR Award from the Texas Higher Education Coordinator Board, ABET's President Diversity Award, and the **White House Presidential Award for Excellence in Science, Mathematics, and Engineering Mentorship (PAESMEM)**.

Louis Dale, Ph.D.



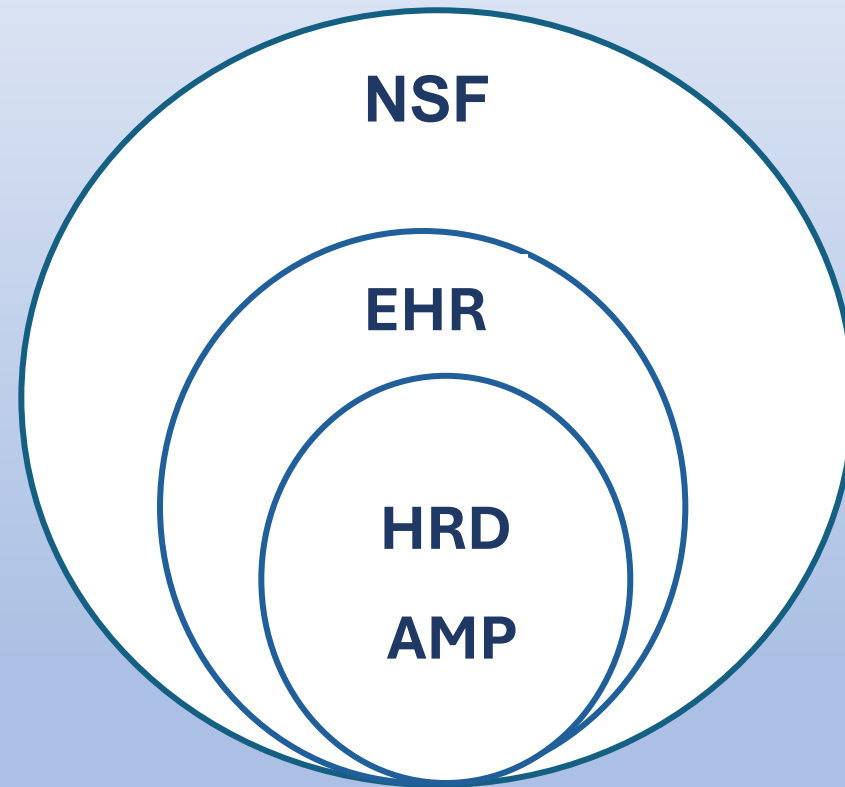
- Dr. Louis Dale is Professor Emeritus of Mathematics and former Vice President for Equity and Diversity at The University of Alabama at Birmingham.
- Dale received his Ph.D. degree in Mathematics from The University of Alabama and served as Professor of Mathematics, Associate Dean and Associate Provost.
- He served as Principal Investigator, in the original NSF Alliances for Minority Participation (AMP) program established in 1991 and as Principal Investigator of the NSF Alliances for Graduate Education and the Professoriate programs established later.
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THE DEVELOPMENT OF A MENTORING PROGRAM

Louis Dale, Ph.D.

Mary Carolyn Braswell, EdD.

Alliances for Minority Participation



NSF - National Science Foundation

Established in 1950 (Harry Truman, President)

EHR - Directorate for Education and Human Resources

HRD - Division for Human Resource Development

AMP - Alliance for Minority Participation

Established in 1991 (George Bush Sr., President)

Under the Leadership of :

NSF Director – Dr. Walter Massey

Assistant Director, HRD – Dr. Luther Williams

Director Division, HRD – Dr. Joseph Danek

Deputy Director, HRD – Dr. Roosevelt Calbert

Director, AMP– Dr. William McHenry

AMP Program Goal in 1991:

**To increase the number of underrepresented minorities earning
STEM doctoral degrees**

Six Original Alliances:

**Alabama, Arizona, California, Mississippi, Puerto Rico, and Texas A&M
(Increased considerably since 1991)**

The LSAMP Program has expanded to include the following:

- Alliance Development Grants (ADG) - New**
- Bridge-to-the-Baccalaureate Alliances (B2B)**
- STEM Pathways Implementation - Only Alliances (SPIO)**
- STEM Pathways Research Alliances (SPRA)**
- Bridges to STEM Graduate Degrees in National Priorities: (BD Master's)**
- Bridges to STEM Graduate Degrees in National Priorities: (BD-Doctoral)**
- STEM Networking Incentives and Engagement (NETWORKS)**



“What an elder sees sitting down, a young man cannot see even if he climbs a tree.”

African proverb (traced to the Igbo ethnic group).



The Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM) - established by the United States White House in 1995.

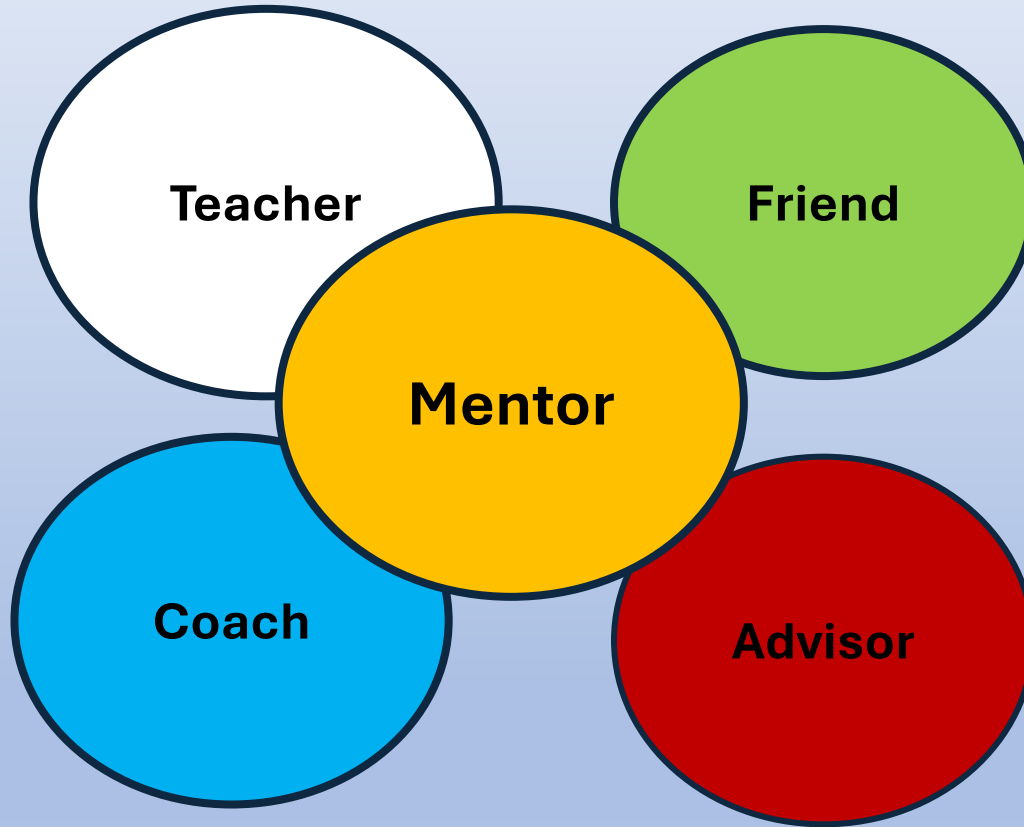
- PAESMEM awards recognize those who have made significant contributions to mentoring and thereby support the future productivity of the U.S. science, technology, engineering and mathematics, (STEM) workforce.
- The National Science Foundation (NSF) administers the awards program on behalf of the White House Office of Science and Technology Policy (OSTP). OSTP selects both individuals and organizations to receive the honor.
- Each Presidential Awardee receives a certificate signed by the President of the United States and a \$10,000 award from NSF. Awardees are honored at an award ceremony which takes place in Washington, D.C.

The **Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)** are the highest honors bestowed by the U.S. Government to **K-12 STEM** teachers.

These awards recognize outstanding educators for their passion, dedication, and impact in the STEM classroom.

Definitions

- **Teacher**- A person who helps students to acquire knowledge, competence or virtue.
- **Friend** - A person whom one knows and with whom one has a bond of mutual affection.
- **Advisor** - A person who gives advice in a particular field.
- **Coach** - A person who trains an individual or team.
- **Mentor** - An experienced person who over a period of time advises and helps a person with less experience.
- **Mentoring** - The act or process of helping and guiding another person to support their professional development. (Senior faculty to junior faculty)



A Few Observations

- A mentor is a person who can support, advise, and guide another person (mentee). The mentor typically takes the time to get to know the mentee and the challenges they are facing and then uses their understanding and personal experiences to help them improve.
- Mentors have the potential to become lifelong friends, or the relationship might only last until the mentee has achieved their goals.
- People choose to mentor because it is a valuable experience seeing others grow and succeed because of their advice.
- All mentors are not effective. If the mentorship is not working, the mentor should be replaced.

The traits of a good mentor include, but are not limited to the following:

- Being a good listener
- Asking good questions
- Showing empathy
- Being encouraging and supportive
- Self-awareness
- A personable demeanor
- Giving constructive and honest feedback

Mentoring at its heart is a relationship between a faculty member and a student to help both individuals learn, grow, and prosper.

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Coaching is a specific, performance-driven, short-term relationship forged to work toward a specific outcome such as the completion of a particular project or activity.

Mentoring is a two-way communication which, when done properly, can benefit both parties.

A great starting point for a successful mentoring relationship is having a student or potential mentee to assess their own strengths, weaknesses, and professional aspirations and share those with their mentor.



Carolyn Braswell, Ph.D.



- Dr. Carolyn Braswell is an Associate Professor of Education and former Associate Vice President for Equity and Diversity at The University of Alabama at Birmingham.
- Braswell received an Ed.D. In Education from the University of Alabama.
- At UAB she has been the Co-Principal Investigator Director for the Louis Stokes Alliance for Minority Participation (LSAMP) program; the Alliance for Graduate Education and the Professoriate (AGEP), and the Bridge to the Doctorate (BD) and ADVANCE programs.
- Dr. Braswell is a shared recipient of the White House Presidential Institutional Award for Excellence in Science, Mathematics, and Engineering Mentoring.



THE UNIVERSITY OF ALABAMA

AT BIRMINGHAM

ALSAMP

MENTORING PROGRAM

KEY REASONS FOR UAB'S ALSAMP MENTORING PROGRAM

To address
systemic
inequalities



To help
navigate any
biased
environments

To provide
culturally
relevant
support and
guidance

To boost a
student's self-
confidence &
and
motivation

To provide
academic
support

To provide
insights into
navigating the
educational
system

UAB ALSAMP/BD Mentoring Program Activities

Before embarking on the program, we collaborated and determined the program's schedule, needed policies and procedures, including:

- A. Categories of participants in the program.
- B. Time element required.
- C. Costs to be incurred.
- D. Forms and matching criteria.
- E. Oversight responsibilities.
- F. Evaluation tools.

Getting Started

Individual group meetings were held with potential participants in the mentorship program:

ALSAMP Scholars (mentees)

Bridge to the Doctorate Fellows (Will serve in two capacities: as mentors and mentees)

STEM Leadership and faculty (mentors)

Agenda

- Mentoring Program Goals
- Purpose/Benefits
- Scope
- Structure
- Mentors and Mentees
- Activities
- Communication
- Evaluation

Mentoring Meeting with ALSAMP Scholars and BD Fellows:



1. A description of the mentoring program was given and benefits of participation.
2. Tentative roles of a mentee and/or mentor was explained.
3. A “Getting to Know You” survey sheet was given to each LSAMP Scholar and BD Fellow to be completed and returned.
4. The sheets would be shared with other participants in the matching activities at a future Launch Luncheon.

Information collected:

Name

Email

Phone

Major

Class schedule

Goals and Aspirations

Interests/Talents

Academic Needs

Academic Strengths

Other

Mentoring Meeting with STEM Leadership & Faculty

1. Explain program and goals

Met with institutional leadership, STEM deans and department chairs to explain the reasons for the mentoring program; the benefits for mentors and mentees, the structure and scope.

2. Share Incentives

- Value of mentoring for faculty development.
- Career advancement - may be used for tenure and promotion.
- Establishment of a strong learning community.
- Recognition: Acknowledgments and celebration of mentor's contribution to the program.
- Sense of professional satisfaction through seeing someone else mature, network and achieve academically.
- Possibility of a long lasting-friendship and fellow STEM professional.

3. Identify Potential Mentors

- Current faculty and chairs were asked for recommendations for potential mentors who demonstrated strong mentoring qualities and were diverse, approachable, knowledgeable and supportive.

4. Communicate the Program

- Conferred with recommended persons to gauge their interests and build a relationship.
- Potential mentors were confirmed and invited to participate in the Launch Luncheon to interact with potential mentees. Student survey sheets would be shared in anticipation of matches being made.

Criteria to be Considered for Effectively Matching Mentors and Mentees

1. Shared Goals and Aspirations
2. Relevant Experience and Expertise in the Mentee's Field
3. Communication and Interpersonal Skills
4. Language Requirements
5. Availability and Commitment
6. Shared Interests and Background
7. Mentee's Needs and Strengths
8. Mentor's Skills and Strengths



What Are The Roles and Responsibilities of The Mentor?

1. Guide the mentorship process and ensure mentees get the most value from the relationship.
2. Create a schedule with mentee and determine preferred methods of communication.
3. Agree to confidentiality.
4. Work with mentee to set realistic goals and strategies and establish deadlines to accomplish them.

5. Provide valuable feedback that the mentee can use as they work toward their goals.
6. Answer mentee's questions, drawing on their own experiences and successes.
7. Inform mentee about departmental changes, events, campus organizations and activities.
8. Consider personal obligations, passions, and goals and encourage mentees to seek their own paths.



9. Serve as a reliable connection.

10. Be the mentee's advocate.

11. Respond to program surveys requested by program director.

12. Track mentee's progress and refer them, if needed, to the appropriate campus resource.

13. Always offer constructive feedback.



FOR THE MENTEE, WHAT ARE THE BENEFITS of MENTORING?



A local and knowledgeable advocate.

Quicker and more positive orientation to the university and academic requirements and resources.

Guidance in making the right connections on and off campus.

Increased exposure to ideas, people, places, and events that will be helpful in becoming a successful student.



6. A continuing source of experienced, confidential, and non-threatening advice.

7. A sounding board for frustrations, failures, and reassurances.

8. An additional advisor regarding the importance of undergraduate and graduate schools.

9. Possibility of a long lasting-friendship and fellow STEM professional.

WHAT ARE THE ROLES AND RESPONSIBILITIES OF THE MENTEE?

1. Commit to confidentiality.
2. Set and strive to accomplish mentorship goals.
3. Communicate regularly and honestly with their mentor.
4. Confer with mentor about any academic issues posing a problem.
5. Seek advice about the ALSAMP Spring Research poster project.
6. Honor agreed upon meeting times.
7. Complete mentee feedback forms as requested by the director.



BENEFITS FOR THE GRADUATE MENTOR:

- **Development of leadership and communication skills:** Mentoring requires strong communication, empathy, and leadership skills, which can benefit graduate students in their own academic and professional development.
- **Increased sense of purpose:** Mentoring can provide a sense of purpose and fulfillment, allowing graduate students to contribute to the success of others.
- **Enhanced understanding of their field:** By interacting with and supporting mentees, mentors can gain a deeper understanding of their field and its challenges.

Key Roles of a Graduate Student Mentor

- Guide and Advisor (Not to replace the academic advisor)
- Resource and Support
- Role Model
- Advocate

Tips for Effective Mentoring

- Establish Clear Expectations
- Communicate Regularly
- Be Empathetic and Supportive
- Promote Intellectual Independence
- Foster a Sense of Community



Matching Mentor and Mentee Process

Mentoring Launch Luncheons

Mentoring Launch Luncheon I was jointly held for the LSAMP Scholar mentees and BD Fellow mentors. They shared their personal survey sheets, interacted with potential mentees or mentors and a review of selection criteria was given. At the conclusion of the luncheon, each attendee was asked to list on a card the names of two persons with whom they would prefer to be matched. Cards were collected by the director and the matching results were announced via email to the participants.

Mentoring Launch Luncheon II for BD Fellow mentees and STEM Faculty mentors was jointly held. They interacted one on one. BD students shared their survey sheets and faculty members discussed their fields of interest. A review of selection criteria was given. All were asked to list on a card the names of their two matching preferences. Cards were collected by the director and the matching results were announced via email to the participants.

Communication with matched partners continued to support a successful and meaningful experience for both mentees and mentors.

Oversight included anecdotal feedback, one on one conversations with mentors and mentees, small and whole group discussion meetings, mid-term status surveys and a final evaluation.

Announcements and newsletters were sent to mentors and mentees throughout the year of suggested campus academic, professional and social activities, that might enrich their mentorship experience.

At the Conclusion of the Year:

A concluding highlight of the mentoring program was a formal recognition ceremony hosted by UAB STEM leadership that presented each mentee with a framed Mentee's Certificate of Completion of the ALSAMP Mentoring Program and presented each mentor with a framed Certificate of Appreciation for Outstanding Service as a Mentor in the ALSAMP Mentoring Program.

Mentors and mentees completed an evaluation survey assessing the degree to which the program was implemented, the quality of their mentee/mentor relationship and to what extent the goals of the partnership were achieved or needed further study.

A number of the partnerships opted to continue their mentoring relationship as they felt it had contributed to their personal, social and academic success.

Six Considerations For A Mentoring Program

I. Matching mentors and mentees carefully:

Ensure compatibility on shared experiences, interests and career goals.

II. Informing mentors:

Provide mentors with information and support relative to the challenges they may face.

III. Recognizing and addressing the specific needs of each student:

Consider each student's academic goals, individual challenges and aspirations.

IV. Providing a reassuring meeting environment:

Secure a space where open and confidential conversations can occur.

V. Responding promptly to problems or concerns expressed:

Follow-up promptly to address and resolve problems.

VI. Establishing a logic model for program evaluation:

The degree to which the program is implemented, mentee/mentor relationship quality and defined outcomes will be measured.





“The mediocre mentor tells. The good mentor explains.
The superior mentor demonstrates.
The greatest mentor inspires.”

Lucia Ballas - Traynor
Hispanic Media Leader

A large, white, three-dimensional sculpture of the letters 'UAB' stands on a green base in a brick-paved plaza. The letters are hollow and cast long shadows on the ground. In the background, there is a modern building with a curved facade, trees, and a white van parked on a grassy area. A group of people is visible in the distance near a crosswalk.

THANK YOU

Q&A + Open Discussion

Questions for Dr. Dale and Dr. Braswell

Thank You!

CONTACT US:

- Dr. Chris Botanga cbotanga@csu.edu
- Dr. Ben Flores bflores@utep.edu
- Sara E. Rodriguez saraer@utep.edu



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SESSION EVALUATION:



<https://survey.alchemer.com/s3/8208294/LSAMP-NCH-Mentoring-Series-March-2025>