



ANS Winter Meeting & Expo

2019

NUCLEAR TECHNOLOGY
FOR THE U.S. AND THE WORLD

Introduction to NCSD Mentor Match

NCSD Education Committee


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Mentor Match Introduction

- What is it?
- Why?
- Framework design
- Suggested attributes
- Checking in on expectations, progress...
- Mentor Match pair experiences
 - Importance of goal setting, template tool
- Application handout and time for discussion/potential pairing

What is the Mentor Match?

- NCSD Education Committee mission:
 - *“To promote development of nuclear criticality safety expertise by providing opportunities that offer technical growth and recognition”*
- Leverages modular framework: mentors  mentees
- Based on:
 - developing desired skillsets,
 - Communication preferences
- Participants choose skills for focus; technical or soft

Why Mentor Match?

- Everyone needs/benefits from mentoring!
- Many of our colleagues are retiring
- Many of our colleagues are new to NCS
 - Mentoring is important to their training
 - Senior criticality safety engineers benefit from mentoring
 - Show of hands
- NCSD Mentor Match Design
 - Supplement traditional/site-based mentorship
 - Recognize time constraints
 - Allow pairing across sites/countries
 - Support lifetime learning, we are all both mentors and mentees

Modular Framework

- Utilize expertise in skill set areas
- Utilize lessons learned
- Alter structure, schedule, focus areas
- Multiple mentor relationships
 - Expertise in desired focus area may allow more than 1 mentee without additional time requirements
 - Mentees can pair with more than 1 mentor depending on focus areas
 - Professionals new to NCS can mentor in certain focus areas (computational modeling, coding, work/life balance)

Communication Preferences

- In-person
 - If desired, Match helps facilitate meeting, including future ANS/NCSD meetings in advance
- Online
 - Email, video or teleconference
- Resources on NCSD website/collaborate:
 - <https://collaborate.ans.org>
 - <http://ncsd.ans.org/>

Resources to be updated and include Mentor Match lessons learned

Desired Skillsets/Focus Areas

- Process analysis and hazard identification
- Best practices and lessons learned
- Safety culture and questioning attitude
- Non-compliance response
- Control development/implementation
- In situ experiments
- Work/life balance
- Teaching/educational instruction
- Hand calculations
- Presenting (e.g., ANS meetings)
- Critical experiments (design, performance, role in NCS field)
- Understanding and using ANS standards
- NCSD Committee / Officer Roles
- Other
- Conducting walkdowns, assessments, benchmarking
- Writing NCS evaluations
- Responding to reviewer and/or regulator questions/comments
- Criticality Accident Alarm Systems (analysis and/or determination of need)
- Software Validation
- Calculational methods
- Emergency Response/planning
- Non Destructive Assay
- Defense in Depth
- Interdisciplinary interface (nuclear safety, operations, ANS-1, fire safety, etc.)
- Use of moderator controls and/or neutron absorbers

Suggested Attributes of an Effective Mentor

- Professional in the Nuclear Criticality Safety Community
- Coach, teacher, team-builder, and advisor with the ultimate goal to empower the mentee to develop their desired skills and abilities.
- Traits of being open, approachable, good listener, patient, and encouraging
- Accepting of own limitations and mistakes
- Commitment and dedication to the development of the Trainee and the mentorship program
- Exhibits traits of trustworthy, honesty, and integrity
- Dedication to pursuit of beneficial contribution to nuclear criticality safety
- Ability to shape attitude and philosophy by actions and example
- Knowledge on the use of the ANS-series 8 standards, general NCS reference documents, nuclear safety culture and general safety principles.
- Willingness to give the time needed for mentorship program

Suggested Attributes of an Effective Mentee

- Having the education and /or experience commensurate with responsibilities
- Willingness to listen and learn
- Willing to share new discoveries with a Mentor
- Willing to ask questions and admit lack of knowledge
- Energetic in pursuit of knowledge
- Desire to excel in the nuclear criticality safety field
- Desire to obtain “qualifications” to contribute to nuclear criticality safety
- Willingness to give the time needed for the mentorship program
- Desire to be active in the Nuclear Criticality Safety Division of the ANS
- Exhibits traits of trustworthy, honesty, integrity, and questioning attitude

Adult Learning Principles¹:

- Adult learners:
 - Are internally motivated and self-directed
 - Bring life experiences and knowledge to learning experiences
 - Are goal oriented
 - Are relevancy oriented
 - Are practical
 - Like to be respected



1. Malcolm S. Knowles, Elwood F. Holton III, Richard A. Swanson. The Adult Learner: The definitive classic in adult education and human resource development. 2014.
2. Stephen D. Brookfield. Understanding and Facilitating Adult Learning.
3. Geof Alred and Bob Garvey. The Mentoring Pocketbook. 2010.
4. David Kay. Practical Guide to Mentoring, 5th Revised Edition, 2012.
5. David Clutterbuck. Everyone Needs a Mentor: Fostering Talent in Your Organisation. 2004.

Mentoring Stages- Beginning and Middle

- Application → match
- Kickoff!
 - Introductions
 - Expectations/goals, career highlights, relevant experience
 - Communication and timeline
- Progress

*"Do we have
the right
balance to
talking/listening
?"*

*"How are
we doing
meeting the
goals?"*

*"Have we established
a good enough
relationship from
mentoring to work?
What could we do to
strengthen it"*

Mentoring Stages: Ending

- Natural ending- Completion of goals, met agreed-upon time frame
 - Review process
 - Celebrate successes!
 - Agree on future
- Early Ending-It's okay to review and revise!
 - Communication/connection challenges
 - Logistics
 - Not progressing toward goal or goal revision
 - Not in line with learning principles
 - Mentor or Mentee can initiate change
 - Celebrate successes

"I feel we have achieved a lot and wonder if it's time to review and take stock"

"I am wondering if our mentoring may have run its course and think it would be a good idea to review and decide what we want to do in the future"

Mentor Match Pilot Experiences

- Hannah Morbach/James Baker
- James Bunsen/Katherine Goluoglu
- Mandy Bowles Tomaszewski/Jen Alwin
- Jen Alwin/Andy Pritchard

SMART Goal Worksheet

S.M.A.R.T.	Questions...
Specific	Does your goal clearly and specifically state what you are trying to achieve? <i>If your goal is particularly large or lofty, try breaking it down into smaller, specific SMART goals.</i>
Measurable	How will you (and others) know if progress is being made on achieving your goal? Can you quantify or put numbers to your outcome?
Attainable	Is achieving your goal dependent on anyone else? Is it possible to reframe your goal so it only depends on you and not others? What factors may prevent you from accomplishing your goal?
Relevant	Why is achieving this goal important to you? What values in your life does this goal reflect? What effect will achieving your goal have on your life or on others?
Time-bound	When will you reach your goal? <i>Again, if your goal is particularly large, try breaking it down into smaller goals with appropriate incremental deadlines.</i>

Today's Date: _____

Date by which you plan to achieve your goal:

What is your goal in one sentence? (*What's the bottom line?*)

The benefits of achieving this goal will be...

Specific: *What exactly will you accomplish?*

Measurable: *How will you (and others) know when you have reached your goal?*

Attainable: *Is attaining this goal realistic with effort and commitment? Do you have the resources to achieve this goal? If not, how will you get them?*

Relevant: *Why is this goal important to you? Hone in on why it matters.*

Time-bound: *When will you achieve this goal?*

ACTION PLAN

What specific steps must you take to achieve your goal?

This action plan may just get you started. Feel free to create a more detailed step-by-step plan.

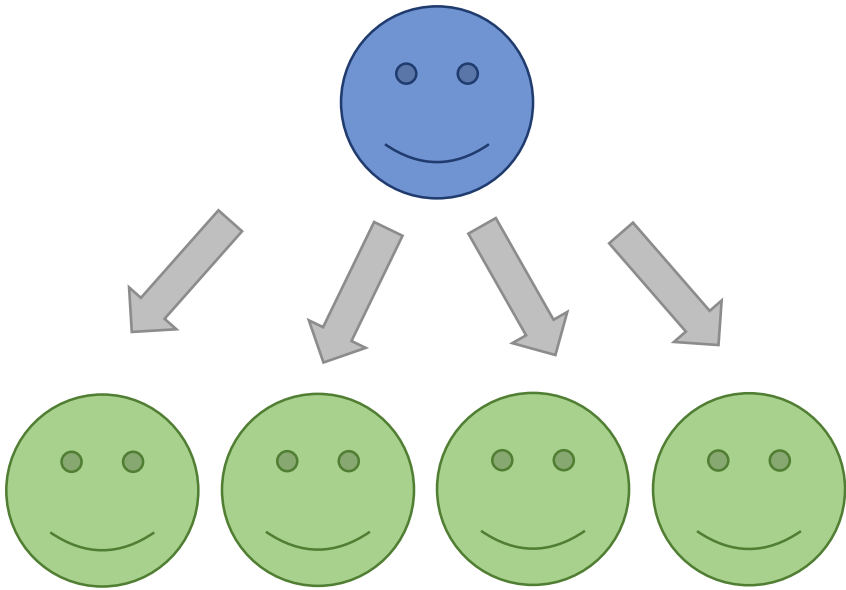
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Application Form/Questions/Discussion

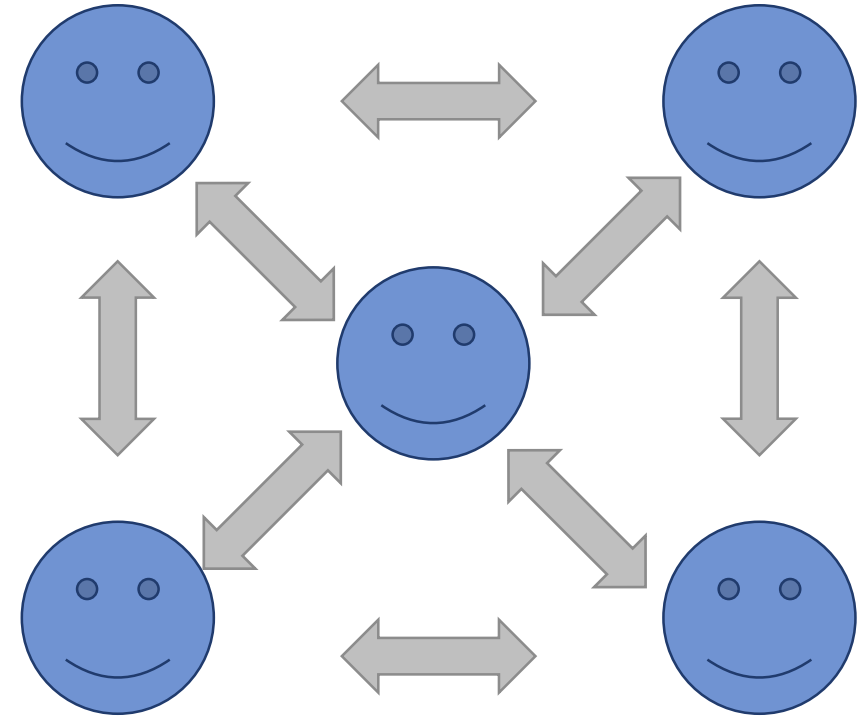
- Apply to be a Mentor and Mentee
 - Separate forms as mentor, mentee
 - Online: <http://ncsd.ans.org/>
 - Paper copy handouts
 - ansmentormatch@gmail.com
- Discussion, introductions
- Thank you for your participation!

Additional Slides

Pedagogy



Androgogy



- We are all mentors and mentees
- Mentor Match tries to help facilitate lifetime learning