

*...the long haul...*

*It takes a lot of effort, a lot of focus, and there's a lot of pain and suffering that goes on in ~~a PhD.~~  
research.*

*If you make it through the process, for better or worse, it's a signal that you can have a long-term focus on a problem and see it through to the end.*

Brett Maune, PhD.  
Ultramarathoner & Physicist

*Researchers*  
Mentoring ~~Students~~<sup>^</sup> in the Laboratory

Chad Risko  
University of Kentucky

*with expertise provided by past & present workshop facilitators!*

Special thanks go to:

Penny Beuning  
Northeastern University

Casey Londergan  
Haverford College

Jen Heemstra  
Emory University

Equip you to approach mentoring as an *intentional process*, rather than one that just happens by chance or circumstance.

## Developing strategies to:

- ✓ communicate expectations to your research mentees
- ✓ create an inclusive environment that provides equitable access to knowledge and resources
- ✓ engage in difficult conversations
- ✓ review mentee progress and development and provide feedback on performance
- ✓ help mentees explore and communicate career aspirations, and make realistic action plans to facilitate their professional growth
- ✓ foster a productive and collegial group culture

# *Two-minute reflection*

Reflect on an experience that you had as a mentee...but, have this experience be ***OUTSIDE of science.***

*What worked?*

*What motivated you to practice?*

*What did not work?*

*Were there coaches/instructors that you just did not connect with?*



# Mentoring practices

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- ❑ Care genuinely about the success of every person you mentor
- ❑ Recognize that mentoring is helping each person identify and achieve their career goals, not replicate your career goals
  - Nobody is exactly like you – be aware of “hidden curriculum” and diverse work styles/needs
- ❑ Set goals and evaluate progress in a clear and transparent way
- ❑ Create clarity around responsibilities and protocols for lab members, *e.g.* via lab manual and structured feedback/evaluation
- ❑ Foster ownership – involve your entire group in decisions about lab culture and report/meeting format

# Mentoring practices (focus on undergraduates [UG])

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- **Everyone** needs to be trained to join a new lab
  - *UG can be very, very central members of any lab, and can also be more creative in many instances than grads/postdocs*
- **Intellectual ownership** is key to continuing motivation
  - *UG should not just be drudges who do not get to see the PI*
- Team roles must be clearly enunciated from the top
- Work to **empower voices** from your entire team – provide multiple channels for feedback, suggestions, and ideas
- Mentoring documents work, as they **set very clear expectations from the start**

## *Case study: The sulky undergraduate*

I mentored an undergraduate student who came from another university for the summer. I explained the project to him and taught him some basic techniques and approaches needed for the work. Because my professor and I did not think he had sufficient background for a more complicated project, we chose to have him work on a more basic one. He was very quiet for the first ten days, and then he went to my advisor and complained about the project. He said he wanted a project “like Mark’s.” Mark was a student with a strong disciplinary background and his project was much more advanced. My advisor insisted that my mentee keep the project I had designed for him, but the student became sulky. As the summer went on and he didn’t get much, if any, of his work done, I began to wonder if he understood what we were doing or even cared about it.

*Think about your role as the advisor in this situation.  
What could you have done to help the student mentor & the  
student researcher?*

# Mentor planning

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<https://tinyurl.com/SampleMentorDocuments>

- Introduction to the laboratory
  - Expectation setting / lab mission statement
  
- Work plans
  - Focus on course requirements & program milestones
  - Establish path to degree completion



# Mentor planning

<https://tinyurl.com/SampleMentorDocuments>

- Review student research progress
  - Focus on research and professional skills
  - Set productivity goals for lab
  - Formative assessment for where student should spend effort on skills development
  
- Individual development plans (IDP)
  - Career focus
  - Student reflection on what they enjoy and are good at in their work life
  - Fosters discussion on long-term aspirations
  - Discuss what it will take to succeed in chosen path
  - Set action plan for career exploration



# Individual development plan (IDP) resources

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## myIDP



- Exercises to examine skills, interests, and values
- List of two dozen career paths, determining the best fit to the skillset
- Tool for setting strategic goals for a year ahead
- Articles and other resources

<https://myidp.sciencecareers.org/>

## ChemIDP



- Assess professional and technical skills
- Strengthen professional and technical skills
- Develop and prioritize goals and values
- Explore career options  
*Browse through a range of career areas, sectors or roles of interest*

<https://chemidp.acs.org/>

# Nobody should wonder how they are doing

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- ❑ What matters to you?
  - program milestones
  - research goals and progress
  - publications and presentations
  - professional development and formulation of career plan
  - grades (especially for undergraduates)
  
- ❑ How can you evaluate and communicate?
  - weekly or monthly 1:1 meetings
  - annual review or evaluation
  - group meetings
  - program requirements

*The format of reports and meetings should be designed to evaluate all things that matter!*

# Prioritize your researchers

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## *Good mentors are available*

- Plan time to prioritize your group members and your mentoring
  - Before the semester starts, block out all group/individual/research meetings
  
- Create communication channels for your group members
  - Personal contact info (with boundaries)
  - Email priority
  - Slack or other app
  
- Enable your group to make plans and organize events (with your review and consent), and then be there when they do

## *Case study: The struggling student*

I had a very, very smart and capable undergraduate student whose mother died during her freshman year. She kept working hard and was getting straight A's and taking extra classes every semester. Two years later, she stopped showing up regularly to group events, and her class attendance dropped off precipitously. She only infrequently responded to direct email contacts from me and my colleagues and did not respond to communication from her academic students' dean.

*What (if anything) should you do?*

# Mental health crisis in academia

News > Campus Beat > More and more students need mental health services. But colleges struggle to

## More and more students need mental health services. But colleges struggle to keep up

By Caroline Simon, University of Pennsylvania 2:28 pm EDT May 4, 2017

LEARNING RESILIENCE

## Colleges Get Proactive in Addressing Depression on Campus

EMPLOYMENT

## How to create a supportive mental health environment in your lab

Faculty can do these 3 things to help their students struggling with mental health issues

by *Jen Heemstra*

JULY 3, 2019 | APPEARED IN **VOLUME 97, ISSUE 27**

HEALTH + BEHAVIOR

ENVIRONMENT + CLIMATE

NATION, WORLD + SOCIETY

ARTS + CULTURE

STUDENTS + CAMPUS

## Study shows stigma around mental health on campus correlates with students not seeking treatment

UCLA-led research team examined data from the Healthy Minds Study, which surveys campuses across the country

Jessica Wolf | January 23, 2018

# Mental health crisis in academia

## Degrees and depression

PhD and master's students worldwide report rates of depression and anxiety that are six times higher than those in the general public (T. M. Evans *et al. Nature Biotech.* **36**, 282–284; 2018). The report, based on the responses of 2,279 students in 26 nations, found that more than 40% of respondents had anxiety scores in the moderate to severe range, and that nearly 40% showed signs of moderate to severe depression. The high rates suggested by this study are alarming, says Teresa Evans, a neuroscientist at the University of Texas

*Science* **2018**

*Nature Biotechnology* (2018) 36, 282-284  
DOI: 10.1038/nbt.4089



# Mental health crisis in academia

*See something, say something, do something!*

**Is the student a danger to self, or others, or does the student need emergency assistance?**

## **“Yes”**

The student’s conduct is clearly and imminently reckless, disorderly, dangerous, or threatening and is suggestive of harm to self or others in the community.

**Call 911 or  
Campus Police 949.824.5223**

**After speaking with police report the concern to: Campus Consultation Team by contacting the Associate Vice Chancellor 949.824.4642**

## **“I’m not sure”**

The student shows signs of distress, but I am not sure how serious it is. My interaction has left me feeling uneasy and/or concerned about the student.

**Call the Counseling Center for consultation 949.824.6457  
After Hours & Holidays: select the after hours service option to be connected to a live mental health specialist**

## **“No”**

I am not concerned for the student’s immediate safety, but he/she is having significant academic and/or personal issues and could use some support or additional resources.

**Refer student to an appropriate campus resource. See back panel for options.**

**For a complete list visit:  
[www.whcs.uci.edu/csw](http://www.whcs.uci.edu/csw)**

- Get to know your campus counseling staff (invite to faculty/group meeting)
- Carry relevant numbers/brochures with you
- Be willing to walk/introduce students to key resource people
- Write lab policies that support self-care and mental health

# Mental health crisis in academia

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## *Take care of you!*

- ❑ You cannot be an effective leader and mentor when you are not taking care of yourself
- ❑ Sharing your own struggles destigmatizes mental health challenges
- ❑ When you devote time to self-care, you give your group members permission to do the same

As far as small dog can tell, you're doing your best given the circumstances!



small dog admires you for your effort!

# Takeaway messages

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- ❑ Past mentoring relationships shape the way you mentor current students
- ❑ Be *intentional* with your plans and actions and establish clear lines of communication between yourself and your mentees
- ❑ Mentoring documents increase clarity and ensure equitable communication of policies and procedures
- ❑ Leadership and mentoring is an experiment – talk with your group about what you want to change, try new things, and evaluate
- ❑ *It is OK to make mistakes!* Admit them and learn from them – you will grow as a mentor, just as you do as a scientist
- ❑ Be aware of academic, physical, and psychological indicators of distressed students. Know how to respond and make referrals

*Failure is not fatal, but failure to change might be.*

John Wooden

Hall-of-Fame Basketball Player & Coach