

Professional Development: Key to Success in Grad School

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DMS Brown Bag seminar

September 29, 2021

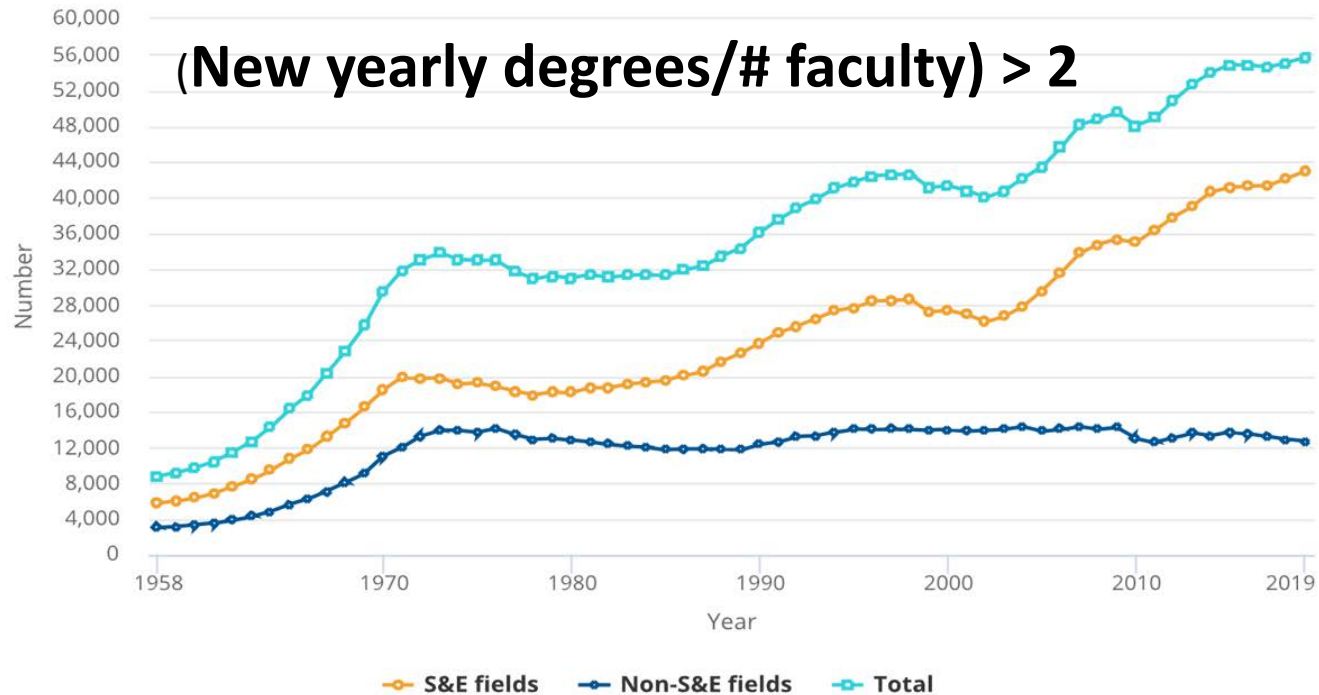


*The Secret to Spontaneity is Planning
Chance favors the prepared mind*

*You are the master
of your universe.*

The Professional Landscape

Doctorates awarded by U.S. colleges and universities: 1958–2019

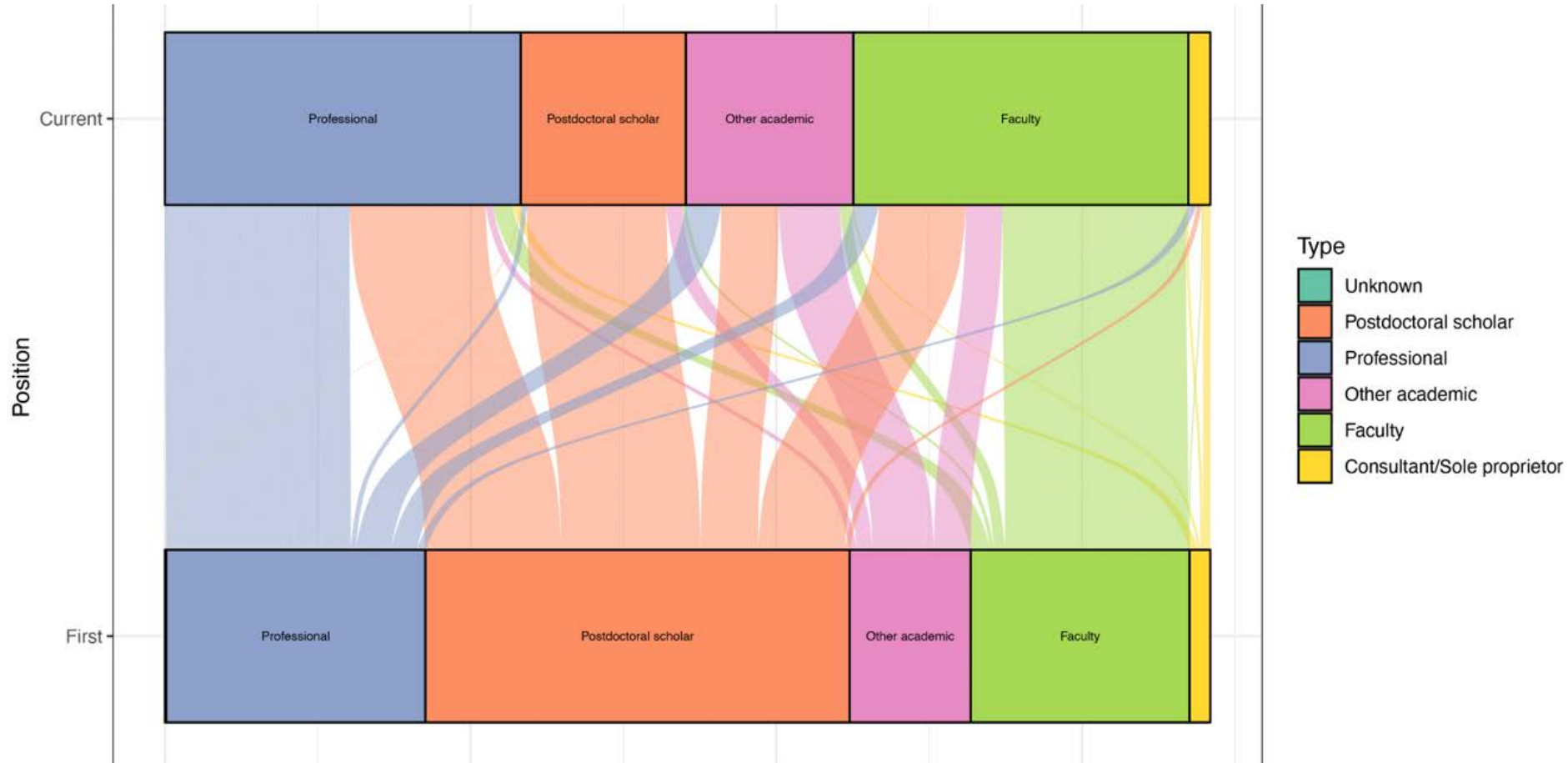


S&E = science and engineering.

Source(s):

National Center for Science and Engineering Statistics, Survey of Earned Doctorates, 2019. Related detailed table 1.

Career Path Post-Graduation



Source: Uconn Grad School

CAREER READINESS

Competencies for a Career-Ready Workforce **Overview**

Competencies

There are eight career readiness competencies, each of which can be demonstrated in a variety of ways.

 Career & Self Development

 Equity & Inclusion

 Teamwork

 Communication

 Leadership

 Technology

 Critical Thinking

 Professionalism

What is Career Readiness?

Career readiness is a foundation from which to demonstrate requisite core competencies that broadly prepare the college educated for success in the workplace and lifelong career management.

naceweb.org/career-readiness-competencies



naceweb.org/career-readiness-competencies

Not Much Different for Postdocs

 THE NATIONAL POSTDOCTORAL ASSOCIATION'S
CORE COMPETENCIES

DISCIPLINE-SPECIFIC CONCEPTUAL KNOWLEDGE

An overall understanding of implications of work on broader field, the importance of innovation & creativity, & grasp of cultural, language & technical discipline-specific knowledge.

- Analytical approach to defining scientific questions
- Design of scientifically testable hypotheses
- Broad based & cross-disciplinary knowledge acquisition
- Interpretation & analysis of data

RESEARCH SKILL DEVELOPMENT

Ensure that postdocs are adequately equipped to carry out independent research, whether in bench- or non-bench related professions.

- Research techniques & laboratory safety
- Experimental design
- Data analysis & interpretation
- Statistical analysis
- Effective search strategies & critical evaluation of the literature
- Principles of the peer review process

COMMUNICATION SKILLS

Postdocs should master communication skills which ensure that messages are heard & understood by the appropriate audience.

- Writing (scientific publications, grants/applications, career documents)
- Speaking (presentations, interviews)
- Teaching
- Interpersonal Skills (style, negotiation, reviews/feedback, networking, conflict resolution, media management)

PROFESSIONALISM

Postdocs instill and enforce the virtues of honor, integrity, compassion, cooperation, reliability, & enhance the perception of this work in society.

- Workplace professionalism (diverse teams)
- Institutional professionalism (connecting at/across/with institutions as employees or representatives)
- Collegial professionalism (engaging as a citizen to scholarship)
- Universal professionalism

LEADERSHIP & MANAGEMENT SKILLS

Postdocs should understand which leadership styles are appropriate for any given time & situation increase performance & productivity. Leaders must also be able to competently manage projects, budgets, & staff.

- Management Skills (research staff management, project management, data & resource management, general management)
- Leadership Skills (Identifying & clarifying goals, motivating/inspiring others, serving as a role model)

RESPONSIBLE CONDUCT OF RESEARCH (RCR)

The pursuit & advancement of knowledge depend on openness, honesty, objectivity, & trust. Therefore, postdocs are responsible for upholding & engaging the ethical norms of their fields.

- Data ownership & sharing
- Publication practices & responsible authorship
- Research with human subjects or animals (where applicable)
- Identifying & mitigating research misconduct
- Conflicts of interest

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- The six core competencies are:
1. Discipline-specific conceptual knowledge
 2. Research skill development
 3. Communication skills
 4. Professionalism
 5. Leadership and management skills
 6. Responsible conduct of research

Geosciences-Specific

- Oral/written communication
- Teamwork/collaboration
- **Technology mastery** (data management, analytics, modeling, AI, Bioinformatics, etc.)
- Leadership/Management
- Professionalism/work ethic
- Self-awareness and career development
- Global perspective

Source:

http://www.jsg.utexas.edu/events/files/Grad_skills_Summit_2019.pdf

ONGOING GRADUATE STUDENT CAREER PREPARATION ACTION ITEMS

Engage NOW to become the most competitive candidate!

Understand & Utilize Campus Resources

- Become familiar with the services and resources that the Center for Career Development offers graduate students. <http://career.uconn.edu/>
- Gain knowledge about any career preparation that occurs within your field of study at UConn or through your professional associations.
- Learn about the programs and services offered by the Writing Center. <http://writingcenter.uconn.edu/>
- Connect with programs at the Institute for Teaching and Learning to stay current with best practices in the classroom. <http://itl.uconn.edu/>
- Read career-related announcements sent to you through the Graduate Student Listserv and other communication channels.
- View The Graduate School's centralized calendar of events.
- Consider enrolling in a UConn Certificate Program to build a specific skill set and knowledge base. <http://grad.uconn.edu/>

Create and Keep Professional Documents Up-to-date

- Update or create your CV and/or résumé and review it each semester.
- Keep an electronic portfolio of anything that you feel shows evidence of your accomplishments.
- If you teach, compile student evaluation data of your courses.
- Familiarize yourself with the content that is typically included in a Statement of Teaching Philosophy and/or Research Statement.
- If embarking on an academic job search, periodically write down ideas of content to include in your Statement of Teaching Philosophy or Research Statement.
- Create drafts of outreach content that you can adapt when desiring to connect with others for networking, informational interviewing, and/or future job search.
- Ask people for recommendations while they still remember you.

Consistently Explore Career Fields & Career Paths

- Become acquainted with industry-specific job search websites. Identify employers of interest and also view actual jobs, familiarizing yourself with the experiences, skills, and training needed to be a competitive applicant.
- Seek opportunities to develop career-related skills through campus and community involvement and workshop attendance.
- Attend, network, and present at professional conferences.
- Conduct informational interviews with people working in career areas of possible interest.
- Consistently use LinkedIn to learn about peoples' work.
- Test various career paths through short-term career exploration activities, internships, or summer fellowships.
- Identify funding sources for continued research if that is a career path option.

Create & Cultivate Your Digital Footprint

- Conduct an Internet search on your name and see what comes up.
- Create a strong LinkedIn and/or other electronic professional profile.
- Contribute to conversations within professional groups and forums.
- Consider creating a blog or consistently contributing to one in your primary and secondary fields of study.
- Consider creating your own website with professional content.
- Make choices about your digital involvements and create a rhythm to your participation.
- Add videos of your best presentations or job talks to your electronic profile.
- Explore using an electronic dossier service to organize and gather your professional materials.

To schedule an appointment with a career consultant at the Center for Career Development, call 860.486.3013.

career.uconn.edu
860.486.3013
www.ccd

UConn

Professional Development Program for Graduate Students of DMS

**Tools and opportunities for
proficiency:**

- **Research & Scholarship**
- **Professional**
- **Job Market**

Elements of Professional Development Program at DMS

- GPA of 3.0 or above
- Plan of study
- Passing the comprehensive general examination (Ph.D. students)
- Completion of thesis
- Annual student report
- Friday seminar series and brown bag series
- Graduate student research colloquium (Feng)
- Travel awards
- Competitive research fellowships
- **Professional development course (MARN 5500)**
- **Individualized Development Plan**
(<http://marinesciences.uconn.edu/academic/graduate-student-handbook/#prodev>)
- Exit Interview

Proficiency

- **Research and scholarship:**

Research skills, thesis, publications, ethics

- **Professional:**

Presentations, grants, research management, leadership, conflict management

- **Job Market:**

CV or résumé, teaching portfolio, job application and interview, networking

IDP Advantages

- Research and scholarship proficiency
- Learn the business of science
- Prepare to succeed in the work market
- Satisfactory and productive experience in graduate school

Building your IDP (see graduate student handbook)

- **Aptitudes/Interests:** Assess current skills, strengths and weaknesses, interests, and explore career fits
- **Plan:** How to develop skills to meet academic and professional goals
- **Evolve:** Communicate with supervisors, advisors, and mentors about changing goals and related skills

See: myidp.sciencecareers.org

Your IDP Road: You and Your Mentor

<i>Basic Steps</i>	<i>For Graduate Students</i>	<i>For Mentors</i>
Step 1	Conduct self-assessment	
Step 2	Write an IDP. Share IDP with mentor and revise	Review IDP and help revise
Step 3	Implement the plan. Revise IDP as needed	Establish regular progress review
Step 4	Survey opportunities with mentor	Discuss opportunities with student

Creating your IDP

<p>Areas to develop (Assess your scholarly and professional competencies. What do you need to develop?) Questionnaire</p>	<p>Goals: long—term (What will you do to improve in the areas you have identified?) SMART</p>	<p>Goals: Short term (What could you do this year?)</p>	<p>Strategy for Reaching Goals</p>	<p>Steps and Timeline for completion of goals (What steps will you take to accomplish your goals and by when?)</p>	<p>Resources available (Human or electronic)</p>	<p>Outcomes (What will you have done to indicate that you have reached your goals?)</p>

SMART

- **S**pecific – Is it focused and unambiguous?
- **M**easurable – Could someone determine whether or not you achieved this goal?
- **A**ction-oriented – Did you specify the action you will take?
- **R**ealistic – Considering difficulty and timeframe, is this goal attainable?
- **T**ime-bound – Did you specify a deadline?

Areas and Goals for Professional Development – Matt Sasaki

Establish a broad knowledge base –

Strategy goals [career advancement]:

- Consistently attend seminars and lecture series
- Continue to read papers on a wide range of topics; discuss with other people or in a journal club

Tactics goals [skill improvement goals]:

- Take courses on molecular biology (Fall 2017)

Become more comfortable with statistical analysis and design of experiments –

Strategy goals:

- Work on critical analysis of experimental design from papers
- Take an active role in experimental design in lab projects

Tactics goals:

- Take two stats courses (Fall and Spring 2017-2018)

Work on writing papers and navigating the peer review process –

Strategy goals:

Tactics goals:

- Publish at least one paper a year

Begin to work on writing and managing grant proposals and budgets –

Strategy goals:

- Study successful funding proposals

Tactics goals:

- Complete preliminary study and furnish results into full NSF proposal (Fall 2017?)
- Talk with Lydia about managing lab and ordering

Become comfortable presenting research to scientific audiences –

Strategy goals:

Tactics goals:

- Give at least 1 scientific talk per year (brown bag or at conference)

Hone teaching and mentoring; Become more comfortable with delegating tasks –

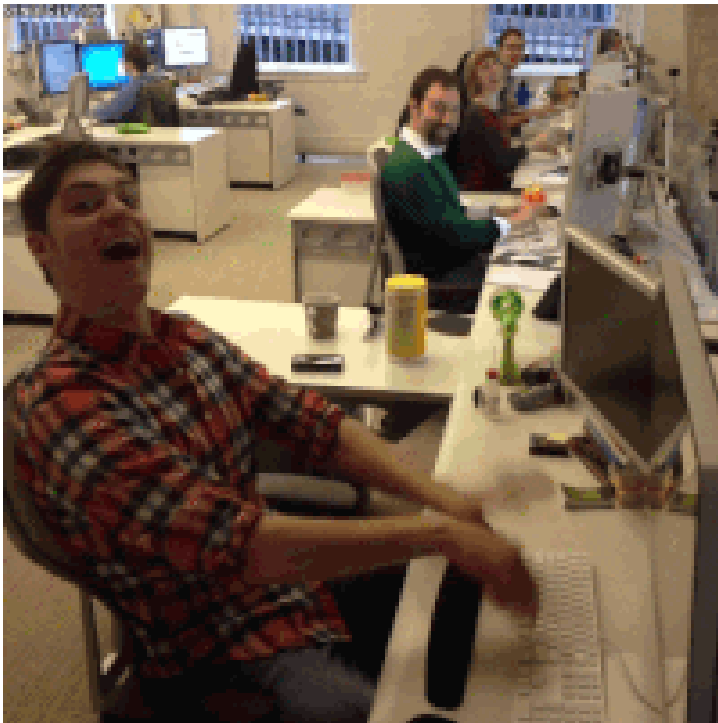
Strategy goals:

- Mentor/work with undergrads on research project
- Continue to TA courses

Tactics goals:

- Lecture for undergrad courses when available
- Take at least 1 workshop on teaching/pedagogy per year

WHAT'S YOUR NEXT STEP?



- **Giddy up: Start working on your IDP**
- **Will ask for IDP in your annual report (due in January)**