



The University of Texas at Austin
Career Services
College of Natural Sciences

Career Planning with Individual Development Plan

Po-Tsan Ku, PhD, MBA

Career Development Specialist for
Graduate Students and Postdocs

November 14, 2024



Common STEM Career Paths

- **Academic**
 - Principal investigator in a research-intensive institution
 - Research staff in a research-intensive institution
 - Combined research and teaching careers
 - Teaching-intensive careers in academia
 - Research administration
 - University administration
- **Communication**
 - Science education for non-scientists /science outreach
 - Science writing
 - Science policy
- **Industry**
 - Research in industry
 - Sales and marketing of science-related products
 - Support of science-related products
 - Drug/device approval and production
 - Scientific/medical testing
 - Data science & software development
- **Education**
 - Science education for K-12 schools
 - E-learning & instructional design
- **Government**
 - Public health related careers
 - Science policy
 - Conservation
 - Drug/device approval
 - Scientific/medical testing
 - Research & development
 - Research administration
- **Intellectual property**
 - Patent law
 - Technology commercialization
- **Nonprofit**
 - Conservation
 - Nonprofit management
 - Research & development
 - Data science
 - Think tank
- **Clinical**
 - Clinical research management
 - Clinical practice
- **Business**
 - Business of science
 - Finance
 - Entrepreneurship



CNS Individual Consultations – Personal Career Portal

- Career exploration
 - Identify viable career options
 - Strategy to launch your career
 - Find networking contacts
 - Informational interview
- Job application fundamentals
 - Job/internship search strategies for non-academic jobs
 - Academic job search (faculty and postdoc positions)
 - CV, cover letter, research statement and teaching statement
 - Identifying the skills that transfer to non-academic jobs
 - Converting CV to resume
 - Resume and cover letter review and editing
 - Interview preparation
- Offer evaluation and salary negotiation

Po-Tsan Ku, Career Development Specialist for Graduate Students and Postdocs

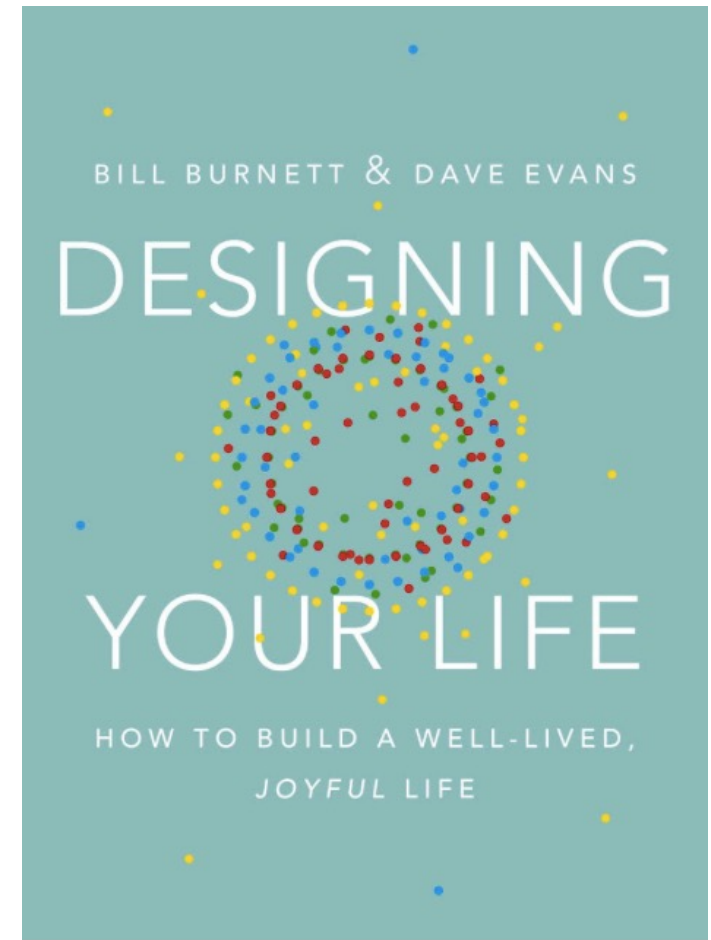
Make an appointment:

Email: po-tsan.ku@austin.utexas.edu



Think Like a Designer

- **Curiosity**
 - Generate lots of ideas and explore options
- **Bias to action**
 - Prototype experiences and conversation
- **Reframing**
 - Step back, examine biases and move toward a solution
- **Radical collaboration**
 - Build a mentoring team





My IDP – Self-Assessment



[LOG ON](#) | [CONTACT US](#) | [ABOUT myIDP](#) | [ABOUT Science Careers](#)



You have put a lot of time and effort into pursuing your PhD degree. Now it's time to focus on how to leverage your expertise into a satisfying and productive career. An individual development plan (IDP) helps you explore career possibilities and set goals to follow the career path that fits you best.

myIDP provides:

- Exercises to help you examine your skills, interests, and values
- A list of 20 scientific career paths with a prediction of which ones best fit your skills and interests
- A tool for setting strategic goals for the coming year, with optional reminders to keep you on track
- Articles and resources to guide you through the process

There is no charge to use this site and we encourage you to return as often as you wish. To learn more about the value of IDPs for scientists, read the [first article](#) in our myIDP series.

Click below to get started.

[First Time Here?](#)

[Returning User](#)

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San Francisco

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for Experimental Biology

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Explore career path matching your interests, skills, and values



My IDP – Consider Career Fit

Consider Career Fit

Quick Tips

My Career Path Matches

The table below lists career paths commonly followed by PhD-level scientists.

Click on the percentages in the right-hand columns to see how your skills and interests compare to the skills and activities most important to each career path category (as rated by professional career advisors). [Return to the Quick Tips](#) to learn about how these match scores may feel that these results limit your career options. You may be able to improve key skills to allow success in any career path.


Click anywhere in the "Values" column for a list of questions to help you think about how your values may fit into each path. Keep these questions in mind as you learn more about each career path in later sections of the module.

Career Path	Skills Match	Interests Match
Sales and marketing of science-related products: Medical science liaison; technical sales representative; marketing specialist	96%	86%
Support of science-related products: Technical support specialist; field application specialist; product development scientist or engineer	97%	80%
Intellectual property: Patent agent; patent attorney; technology transfer specialist	93%	81%
Research administration: Research administrator in private or public research institutions, government or academia, including compliance officers, grants and contracts officers; dean or director of research programs	90%	84%
Drug/device approval and production: Regulatory affairs professional; quality control specialist	96%	77%
Public health related careers: Public health program analyst or evaluator; epidemiologist; biostatistician; medical informaticist	96%	75%
Science policy: Public affairs/government affairs staff at scientific societies, foundations, government entities, or think tanks	89%	81%
Business of science: Management consultant; business development professional in a biotech company; venture capitalist; market researcher; investment analyst	87%	81%
Scientific/medical testing: Testing specialist in an environmental, public health, genetics, or forensic science setting (intelligence agencies, federal/state departments of justice); clinical diagnostician	98%	70%
Clinical research management: Clinical research project/trials manager or coordinator	95%	73%
Clinical practice: Clinician such as genetics counselor, therapist, physician	93%	74%
Science education for non-scientists: Education or public outreach specialist such as at a science museum or scientific society	87%	78%
Science writing: Science, medical, or technical writer or journalist; science editor; science publisher	84%	78%
Entrepreneurship: Starting your own business	81%	75%
Teaching-intensive careers in academia: A primarily teaching faculty position in a research university, liberal arts college, community college	85%	71%
Science education for K-12 schools: Classroom teacher; curriculum developer; science specialist	82%	71%
Combined research and teaching careers: Faculty at a liberal arts college or university whose job includes both research and major teaching responsibilities	81%	61%
Research staff in a research-intensive institution: Staff scientist or researcher in academia or government, lab manager, director of a multi-user research facility in an academic institution	88%	54%
Research in industry: Discovery or preclinical researcher; manager of a research team or facility	81%	58%
Principal investigator in a research-intensive institution: Independent researcher at a medical school, private research institute, government lab or university with minimal teaching responsibilities	77%	47%

Explore a number of different careers that you might not have known about previously



Versatile PhD





About PhD Career Finder Forums Meetups Members Jobs News MyVPhD

Welcome, **Po-Tsan Ku**. The Versatile PhD site recognizes you as affiliated with UT Austin. If that affiliation is not correct, kindly email webmaster@versatilephd.com. Be sure to check out the [PhD Career Finder](#) and our other career resources!

PhD Career Finder *Access to Versatile PhD - <http://gradschool.utexas.edu/services-and-resources/career-resources/versatile-phd>*

Choose one

**Humanities & Social Sciences**

**Science, Technology, Engineering & Mathematics**

--Choose a STEM Career--

Biotechnology
Conservation
Consulting
Data Science & Software Development
Entrepreneurship
E-Learning & Instructional Design
Finance
Government
Industry
K-12 Education
Marketing
Non-profit
Patent Law
Research Administration
Science and Medical Writing
Science Outreach
Science Policy
Technology Commercialization
University Administration

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Perspectives and candid information about various career paths



LinkedIn: Company Page

LinkedIn industry search codes:

<http://www.patrickomalley.com/linkedin-industry-list-advanced-search.html>

in Search internet Home My Network Jobs

All People Jobs Content **Companies** Groups Schools

[Become a Marketing Leader - Wanna start a successful business? Join our entrep...](#)

Showing 228,236 results

	AOL Internet 1001-5000 employees	Follow
	Comcast Media Production 10,001+ employees	Follow
	Intel Corporation Semiconductors 10,001+ employees	Follow
	Trabajo desde mi casa por Internet Internet Myself Only	Follow
	Amazon Internet 10,001+ employees	Follow
	Cisco Computer Networking 10,001+ employees	Follow
	Google Internet 10,001+ employees	Follow
	Parker Hannifin Mechanical or Industrial Engineering 10,001+ employees	Follow
	eBay Internet 10,001+ employees	Follow
	Qualcomm	

Google
Internet • Mountain View, CA • 6,387,284 followers

[View in Sales Navigator](#) [See jobs](#)

110 people from your school were hired here.
[See all 127,842 employees on LinkedIn](#) →

99+

Overview

Jobs

Po-Tsan Ku
Career Development in the Colle...
[View job openings at Google](#)

Life

About us

Google's mission is to organize the world's information and make it universally accessible and useful.

Since our founding in 1998, Google has grown by leaps and bounds. From offering search in a single language we now offer dozens of products and services—including various forms of advertising and web applications for all kinds of tasks—in scores of languages. And starting from two computer science students in a university dorm room, we now have thousands of employees and offices around the world. A lot has changed since the first Google search engine appeared. But some things haven't changed: our dedication to our users and our belief in the possibilities of the Internet itself.

Company details

Website
<http://www.google.com>

Headquarters
Mountain View, CA

Year founded
1998

Company type
Public Company

Company size
10,001+ employees

Specialties
search, ads, mobile, android, online video, apps, machine learning, and virtual reality

Recent update

[See all](#)

International Women's Day summit series

Join Google's Women's Day summit series as we celebrate International Women's Day 2018 with events around the globe.

[Attend one of 16 global summit...](#)

2,546 Likes • 51 Comments 1d

Stock snapshot

GOOG
NASDAQ Jan 31, 2:30 PM
Up to 20 minute d...

\$1,164.08 Open \$1,170.57
High \$1,173.00
Low \$1,159.30
▲ 0.32 (0.028%)

Data from Morningstar • [Disclaimer](#) [Bing](#)

Ad

Po-Tsan, work with us at Google

- Product Manager**
Cambridge, MA, US
- Product Manager**
Mountain View, CA, US
- Product Manager**
Los Angeles, CA, US

[Careers at Google](#)

People also viewed

Amazon
Internet
10,001+ employees
1 connection works here

Apple
Consumer Electronics



Career Paths for STEM Alumni

- UT Austin alumni page on LinkedIn

The screenshot displays the LinkedIn profile for 'The University of Texas at Austin'. The header shows the university's name, location (Austin, TX), and follower count (347,680+ alumni, 536,485 followers). Below the header, there are navigation tabs: Home, About, Jobs, Alumni (selected), Videos, and Insights. The 'Alumni' section features a search bar and filters for 'Where they live' and 'Where they work'. The 'Where they live' section shows 313,066 alumni in the United States, with a bar chart indicating 126,242 in the Austin, Texas Area. The 'Where they work' section shows 9,193 alumni at The University of Texas at Austin, with a bar chart indicating 1,367 at Apple. Below these sections, there is a grid of alumni profiles, each with a profile picture, name, title, and a 'Connect' button. The profiles shown include Jay Hartzell (2nd President at The University of Texas at Austin), Jagannath S. (2nd Co-Founder at Erisyon), Helen Wormin (2nd Executive Director at The University of Texas at Austin), Nicholas Mey (2nd Co-Founder and CEO at Darwin), Amanda Irving (2nd Executive Director of Development at The University of Texas at Austin), Kate Biberdorf (2nd Ph.D. Chemistry, '14 Inorganic Chemistry), Brent Winkel (2nd Chief of Staff for Computer Science at The University of Texas at Austin), and Clinton Leysath (2nd Program Director at The University of Texas at Austin).



On-Campus Job Search Tool – Career Fairs

- Engineering EXPO
- Technology and Science Career Fair
- Communication Job & Internship Fair
- Liberal Arts Career & Internship Fair
- Bioscience and Biotechnology Career Fair

Great Career Exploration and Networking Opportunity



On-Campus Job Search Tool - Handshake

handshake

Search...

Home

Profile

UT Austin College ...

STUDENTS

Manage

Experiences

Outcomes 9

Applications

First Destination

COMMUNICATE

Mass Emails

Articles

Planning

SCHEDULE

Events 3

Fairs

Appointments

POSTINGS

Jobs 1

Interviews

RELATIONSHIPS

Employers 3

Contacts

DATA

Analytics

Job Postings

Postings New Job

Type to search... Search Saved Searches +

Bulk Actions on All Results

Location

Status Job Type Employment Type Label Not Labels Assigned To Major Employer Ranges Other Followed Only

Job ID	Job Name	Applicants	Job Type	Employment Type	Employer	Interviewing On Campus	Date Posted	Expires	
292656	Systems Engineering Intern (Guidance, Navigation & Control) for Summer 2016	1	Internship	Full-Time	General Atomics Aeronautical Systems	No	2 months ago	April 19th	Approved
282218	Entry Level Electrical Engineer	0	Job	Full-Time	University Corporation for Atmospheric Research	No	2 months ago	April 19th	Approved
209888	Manager, DSRI Programs	0	Job	Full-Time	Maimonides Medical Center - Population Health	No	2 months ago	April 19th	Approved
293746	Urban Teachers Resident	0	Job	Full-Time	Urban Teachers	No	2 months ago	April 19th	Approved
293749	Urban Teachers Resident	0	Job	Full-Time	Urban Teachers	No	2 months ago	April 19th	Approved
293606	Seeking PT tutors for GMAT, ACT, SAT, GRE, MCAT, LSAT, CPA / 35hr	0	Job	Part-Time	Tutor the People	No	2 months ago	April 19th	Approved
293636	Business Development Representative	0	Job	Full-Time	Ultra Corporation	No	2 months ago	April 19th	Approved
293060	Founding School Leader	0	Job	Full-Time	Compass Talent Group	No	2 months ago	April 19th	Approved
293654	Multiple Positions- US Dept of Energy's Pacific Northwest National Laboratory	2	Job	Full-Time	Pacific Northwest National Laboratory	No	2 months ago	April 19th	Approved
293748	Urban Teachers Resident	1	Job	Full-Time	Urban Teachers	No	2 months ago	April 19th	Approved
293632	Business Consultant	0	Job	Full-Time	Ultra Corporation	No	2 months ago	April 19th	Approved
313912	Performance Analyst	0	Job	Full-Time	Office of the Inspector General City of Chicago	No	a month ago	April 19th	Approved



CNS Professional Development Opportunities

- Professional development seminars – non-academic career exploration
 - Medical science liaison career panel discussion
 - Biotechnology industry career panel discussion
 - Data science career panel discussion
 - Business of science career panel discussion
 - Materials science career panel discussion
 - Semiconductor industry career panel discussion
 - Project management career panel discussion
 - Software engineering career panel discussion
 - Conservation career panel discussion
 - Policy career panel discussion
 - Science communication career panel discussion
 - Government career panel discussion
 - Bioinformatics career panel discussion
 - Machine learning career panel discussion
 - Nonprofit career panel discussion
 - Intellectual property career panel discussion
 - Scientific and medical testing career panel discussion
 - Working with start-up companies career panel discussion
 - User experience research career panel discussion
 - University administration career panel discussion
 - Clinical research management career panel discussion



CNS Professional Development Opportunities

- Grant-writing workshops
 - Funding opportunities: [CNS Strategic Research Initiatives website](#)
 - NSF Graduate Research Fellowship Program (NSF GRFP), the NIH National Research Service Awards (NIH NRSA), and the NIH Pathway to Independence Awards (K99/R00)



CNS Professional Development Opportunities

- Concentrations/electives
 - Concentration in Teaching and Mentoring, 3-seminar series offered through TIDES (the Texas Institute for Discovery Education in Science)
 - Partnering with McCombs School of Business, Moody College of Communication, and LBJ School of Public Affairs to develop Concentration in Leadership and Project Management, Concentration in Communicating Science, and Concentration in Science and Public Policy, respectively
- Responsible conduct of research training
 - Core sessions include: research misconduct; publication/authorship; peer review; conflict of interest & financial management/collaboration
- Data analysis workshops
 - Basic software and hardware
 - Basic statistical methods
 - Design and applications (SQL, Next Generation Sequencing, Machine Learning)

<https://cns.utexas.edu/info-graduate-students-postdocs/electives-concentrations>



CNS Professional Development Opportunities

- CNS outreach opportunities
 - Hot Science – Cool Talks (Host: Environmental Science Institute, UT Austin)
 - Present your PhD to a 12 yr-old (Graduate Science Outreach student group)
 - Scientist in Residence Programs (Hosts: Marine Science Institute and Environmental Science Institute, UT Austin)
 - Shadow a Scientist (Host: Freshman Research Initiative, UT Austin)
 - UTeach Outreach (Host: UTeach)



University Professional Development Opportunities

- Texas Venture Labs, a business/entrepreneurship training program offered through the McCombs School of Business
- Herb Kelleher Entrepreneurship Center
- UT CONNECT program
- UT AD2C Club
- UT Archer Fellowship
- The University Writing Center offers free writing support to all UT graduate students. They welcome writers from all programs at all stages of graduate study, and offer individual consultations, weekly writing groups, workshops, and all-day writing retreats
- The Faculty Innovation Center provides an array of resources and services to promote innovation and excellence in teaching and learning
- The Graduate School and Office of Career & Life Design have partnered to provide a variety of workshops to prepare for both academic and non-academic career paths

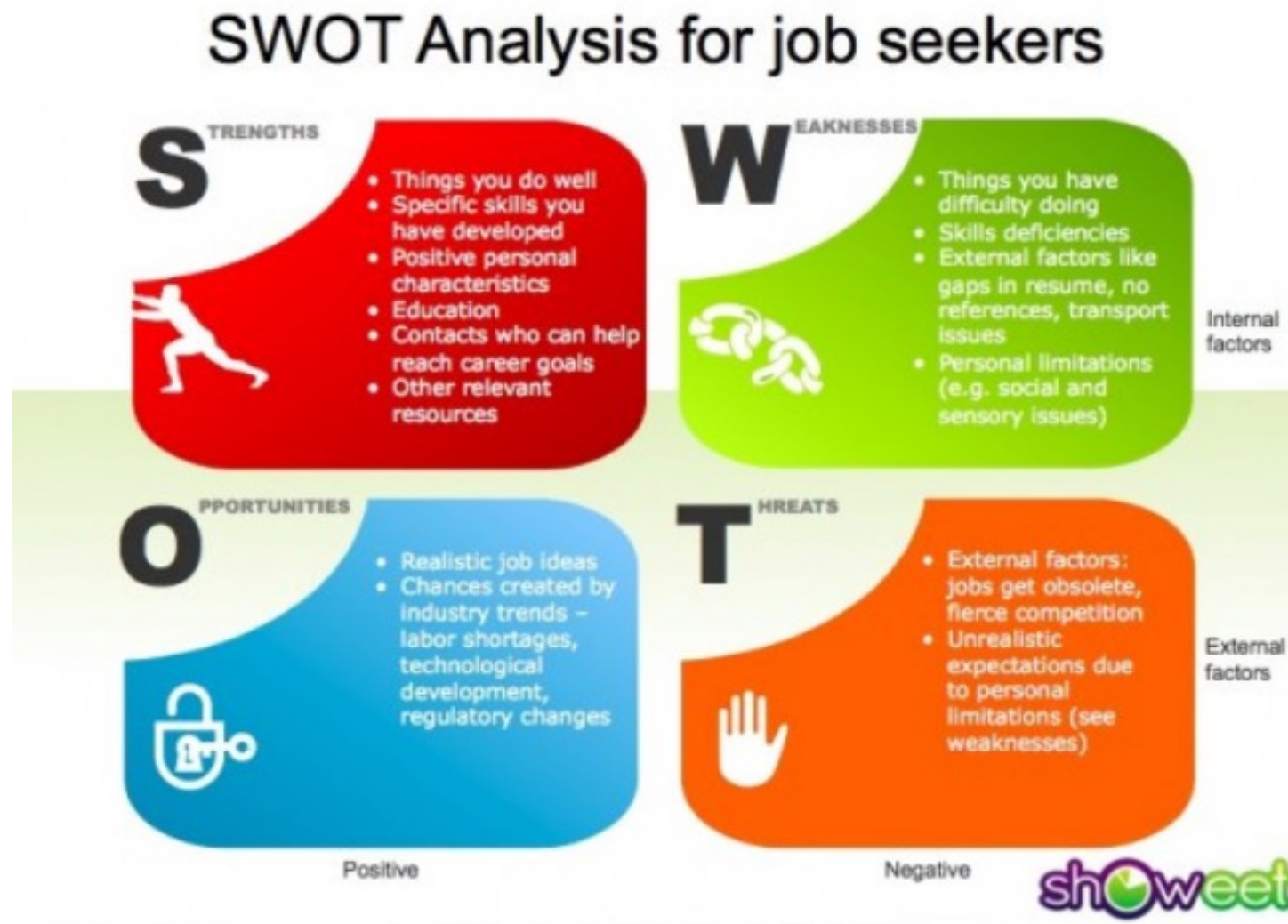


Summary of Resources for IDP

- Individual Consultations
- MyIDP from AAAS
- Versatile PhD
- LinkedIn
- Career Fairs
- Handshake
- Making the Right Moves
- Career and Professional Development Opportunities



SWOT Analysis for Career Planning





Prototyping Experiences in Career Planning





Informational Interviews

- Purpose – **to obtain information from people in different career**
- Learn duties, qualifications, and personality traits of people in the target role
- Learn experience needed
- Learn trends in career field
- Ask for additional professional contacts
- Identify your connections – friends, relatives, fellow students, co-workers, neighbors, professional organizations, organizational directories, and LinkedIn





Set Skills Goals

Scientific Knowledge

<i>Improve</i>	<i>Skill Area</i>
<input type="checkbox"/>	Broad based knowledge of science
<input type="checkbox"/>	Deep knowledge of my specific research area
<input type="checkbox"/>	Critical evaluation of scientific literature

Research Skills

<i>Improve</i>	<i>Skill Area</i>
<input type="checkbox"/>	Technical skills related to my specific research area
<input type="checkbox"/>	Experimental design
<input type="checkbox"/>	Statistical analysis
<input type="checkbox"/>	Interpretation of data
<input type="checkbox"/>	Creativity/innovative thinking
<input type="checkbox"/>	Navigating the peer review process

Communication

<i>Improve</i>	<i>Skill Area</i>
<input type="checkbox"/>	Basic writing and editing
<input type="checkbox"/>	Writing scientific publications
<input type="checkbox"/>	Writing grant proposals
<input type="checkbox"/>	Writing for nonscientists
<input type="checkbox"/>	Speaking clearly and effectively
<input type="checkbox"/>	Presenting research to scientists
<input type="checkbox"/>	Presenting to nonscientists
<input type="checkbox"/>	Teaching in a classroom setting
<input type="checkbox"/>	Training and mentoring individuals
<input type="checkbox"/>	Seeking advice from advisors and mentors
<input type="checkbox"/>	Negotiating difficult conversations

Set goals to improve the skills that are necessary for your chosen career path



Why New Hires Fail

A three-year study compiling results from hiring managers found that 50 percent of newly hired employees failed before finishing their second year due to poor interpersonal skills, such as accepting feedback, conflict resolution, and managing emotions; and only 11% failed because they lacked the necessary technical skills.



Must Have Career Readiness Competencies

- Survey of employers nationwide has identified four “must have” career readiness competencies:
 - Critical thinking/problem solving
 - Conflict management
 - Team work/process management
 - Write and speak with clarity and ease
- For each of the four “must have” career readiness competencies:
 - What employers expect of you
 - How to develop this competency
 - How to demonstrate this competency



Mentoring Team

- Choose a mentoring team
 - Seek multiple mentors, each with a different perspective or expertise that fit your development needs.
- Build a mentoring relationship
- Review and revise your career plan



LinkedIn for Networking – Advanced People Search

The screenshot displays the LinkedIn Advanced People Search interface. At the top, there is a search bar with the text "Search" and a "Search" button. Below the search bar, navigation tabs include "Top", "People", "Jobs", "Posts", "Companies", "Groups", and "Schools". The "People" tab is selected, and a banner for "Lyft's New Redesigned App" is visible.

The main section shows "Showing 8 results" for the search criteria. The results list includes the following individuals:

- Alan Meis** • 2nd
Graduate Student at The University of Texas at Austin
Austin, Texas Area
Current: Senior Scientist at Dow AgroSciences
11 shared connections
- Brannon Sam** • 2nd
Senior Chemist at Dow AgroSciences
Austin, Texas Area
Current: Associate Research Scientist at Dow AgroSciences
7 shared connections
- Negar Garizi** • 2nd
Natural Products Project Leader at Dow AgroSciences
Indianapolis, Indiana Area
Current: Project Leader at Dow AgroSciences
3 shared connections
- Xin Gao** • 2nd
Associate Research Scientist at Dow AgroSciences; Project Leader
Indianapolis, Indiana Area
Current: Associate Research Scientist at Dow AgroSciences
8 shared connections
- Daniel Knueppel** • 2nd
Analytical R&D Team Leader at Dow AgroSciences
Indianapolis, Indiana Area
3 shared connections
- James Ruiz** • 2nd
Associate R&D Director at Dow AgroSciences
Indianapolis, Indiana Area
1 shared connection
- Brian Wendelburg** • 2nd
Global Regulatory Business Partner at Dow AgroSciences
Indianapolis, Indiana Area
1 shared connection

Each result includes a profile picture, name, degree, current position, location, and a "Connect" button.

On the right side, the "Filter people by" section is expanded, showing the following filters:

- Connections:** 1st (checked), 2nd (checked), 3rd+ (unchecked)
- Keywords:** (collapsed)
- Locations:** (collapsed)
- Current companies:** Dow AgroSciences (checked), The University of Texas at Austin (unchecked), Intel Corporation (unchecked), Google (unchecked), Austin Community College (unchecked), + Add
- Past companies:** (collapsed)
- Industries:** (collapsed)
- Profile language:** (collapsed)
- Nonprofit interests:** (collapsed)
- Schools:** The University of Texas at Austin (checked), Purdue University (unchecked), Iowa State University (unchecked), Indiana University-Purdue University Indianapolis (unchecked), Indiana University Bloomington (unchecked), + Add

At the bottom right, there is a link: "Want to better focus your search? View results in Sales Navigator".

Choose contacts: functional relevance > relative seniority > location



Professional Society Conferences for Networking

- Target
 - Speakers
 - Exhibitors
 - Poster presenters
- Outreach
- Engagement





Roadmap to Achieve Long-Term Career Goal





Questions to Consider about Your IDP

- What are your top three career choices?
- Were any of these surprising to you?
- How well do you think these three careers capture your current interests?
- Do you have career tracks where you would like to find more information?
- What are some steps you could take (outside of lab) that might help you explore these careers?
- Do you know how to find opportunities to support your development in exploring any of these careers?
- You should discuss your career plans with your PI. Then, every year you should revisit your IDP, ideally with your PI in an annual meeting. This will allow you to reassess and refine your career plans as you move through graduate school.



Sample IDP for Graduate Student

Career options:

Combined Research and Teaching Careers: (Skills match 78%, Interests Match 82%)

Faculty at a liberal arts college or university whose job includes both research and major teaching responsibilities.

Principle investigator or research staff in a research-intensive institution: (82%, 75%)

Independent researcher or staff scientist at a medical school, private research institute, government lab or university with minimal teaching responsibilities.

SMART goals based on IDP:

Skill Goals:

Statistical Analysis

- Take python course by next year

Time Management

- Have better weekly and monthly plans
- talk with my supervisor at our weekly meetings about what I want to get done that week, and have him hold me to it.

Technical skills related to my specific research area

- Learn to analyze miniscope data
 - Learn python
 - Work with xxxxx on time-series and decoding analyses
 - Work with xxxxx on miniscope specific CNMF-E analysis

Career Advancement Goals:

- Form dissertation committee and regularly meet with them (at least twice a year)
- Go to a conference once a year to network and meet other scientists
 - present a poster at this meeting
- Publish one or two papers before leaving grad school
- Attend UT seminars to advance conceptual neuroscience knowledge
- Work on mentoring and teaching skills
 - Mentor undergrads in lab and through the Neuroscience Undergraduate Reading Program
 - Guest lecture in Neural Systems II once a year



THE UNIVERSITY OF TEXAS AT AUSTIN

College of Natural Sciences

APPENDIX



What Got You Here Won't Get You There

Po-Tsan Ku, PhD, MBA

Career Development Specialist for
Graduate Students and Postdocs

June 14, 2016



Luminex Sample Job Description – Senior Scientist

JOB REQUIREMENTS

Competencies:

- **Conflict Management**—settles disagreement and disputes equitably
- **Problem Solving**— identifies complex problems and reviews related information to develop and evaluate options and implement solutions
- **Process Management**—ability to simplify complex processes and to organize people and activities
- **Timely Decision Making**—decisions can be made quickly even under tight deadlines and pressure

Required Education/Training:

- PhD in Physics, Biophysics, Electrical Engineering, Materials Science, Biomedical Engineering, or related field. MS with equivalent experience.

Required Certifications/License/Special Skills:

- Experience developing instrumentation used for biological testing.
- Experience in the use of statistical methods in the interpretation of clinical/biological data.
- Entrepreneurial determination and ability to drive ideas through initial barriers.
- Ability to influence the way others look at problems.
- Demonstrated ability bringing highly complex systems from concept to market is a plus.
- Demonstrated ability to root cause failures in complex systems.
- Expertise in C++ programming, MATLAB, LabVIEW, R, Python, JMP and/or Perl highly desirable.
- Ability to work independently and with minimal supervision.
- Ability to handle the pressure of meeting tight deadlines.
- Highly organized with proven time management and prioritization skills.
- Enthusiastic and highly motivated.



Genentech Sample Job Description – Sr Scientific Researcher

Who You Are

Technical skills:

The successful candidate will have many of the following characteristics: a detailed knowledge of biochemistry and protein engineering, experience in the use of protein conjugation and protein purification techniques including affinity, ion exchange, size exclusion (SEC), hydrophobic interaction and reverse phase chromatography using HPLC and FPLC platforms. Detailed knowledge of protein characterization by techniques such as mass spectroscopy (LC/MS), SEC / Laser Light Scattering (MALLS), calorimetry, (DSC or ITC), SDS-PAGE, ELISA and immunoblot, as well as determination of ligand binding constants and enzyme kinetics using surface plasmon resonance (SPR), fluorogenic reagents and ligand assays. Knowledge of related techniques such as protein expression in mammalian cells and mammalian cell culture will be helpful.

Education and Experience:

A Masters of Science (M.S.) or Ph.D. in biochemistry, chemistry, molecular biology or related discipline and three or more years of technical experience in areas related to protein chemistry are required. **Excellent communication and interpersonal skills are essential and demonstration of these skill will be an important component of the interview process.** Expertise with standard text, graphic, and presentation software required and familiarity with database/data archival software systems is desired.



Apple Sample Job Description – Software Tools Developer

Key Qualifications

- 3+ years of C and/or C ++ programming experience. High level application development with Multithreaded programming experience. SW version control.
- Python/Perl and Unix scripting
- Understanding of computer architecture, hardware, firmware, operating systems, and user applications, and the interactions between them
- Familiarity with Mac hardware and software is preferred

Other desirable but not required qualifications:

- Experience developing SW drivers for Ethernet, UART and USB communication
- Experience to read Board-level schematics
- Experience using and automating test using Lab equipment (Multimeters, power supplies, oscilloscopes etc)

Soft Skills:

- Exceptional problem solving skills
- Independent, self-starter, with good interpersonal skills, and ability to lead.



Why New Hires Fail

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 - How to develop this competency
 - How to demonstrate this competency



CRITICAL THINKING/PROBLEM SOLVING



What Employers Expect of You

- Solve problems associated with your daily tasks to keep projects moving
- Deal with confusing or ambiguous situations and make timely decisions
- Identify and solve complex problems in a logical and rational manner across departmental groups boundaries
 - Identify and define problem
 - Gather facts/review related information (statistics, time factor, history, all parties involved)
 - Identify the root cause (personnel, process, procedure)
 - Brainstorm possible solutions (be creative)
 - Narrow list to the best solutions
 - Evaluate solutions (pros, cons, resources required)
 - Implement the final solution (who, detailed process, timeline, communication)



How to Develop This Competency

- Develop creative solutions to problems associated with your thesis projects
- Freelance scientific consulting
- Internship or short-term projects in industry
- Texas Venture Labs, McCombs School of Business



How to Demonstrate This Competency

- Describe a relevant experience in your resume
 - Ensure bullets show a specific task (what is the problem, issue, challenge), action (how do you accomplish the task), and quantifiable result/impact
- Behavioral interview questions
 - From time to time we all deal with confusing or ambiguous situations. Tell me about a recent work experience when you had to solve a problem without having all the necessary background information readily at hand.
 - Tell me about a difficult decision you have made in the past year in your work life.
 - Describe an instance when you had to think on your feet to extricate yourself from a difficult situation.

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What To Expect

(+) Application

[Behavioral Based Interviewing](#)



Use Vivid Examples to Respond to Behavioral Questions

Problem or Situation

Action You Took

Result

Lesson Learned



THE UNIVERSITY OF TEXAS AT AUSTIN

College of Natural Sciences

CONFLICT MANAGEMENT



What Employers Expect of You

- Settles disagreement and disputes equitably
- Build and sustain professionally significant and interdisciplinary relationships
 - Knowing how to relate well to people significantly contributes to organizational effectiveness



How to Develop This Competency

- Learn about and appreciate different cultures
- Learn about different personalities and how they approach various situations and how they would like to be treated
- Learn the techniques on how to hold crucial conversations (as these create significant shifts in attitude and behavior) in a positive space when surrounded by highly charged emotions
 - Start with the heart (i.e empathy and positive intent)
 - Stay in dialogue
 - Make it safe
 - Don't get hooked by emotion (or hook them)
 - Agree a mutual purpose
 - Separate facts from story
 - Agree a clear action plan



How to Demonstrate This Competency

- Describe a relevant experience in your resume
 - Ensure bullets show a specific task (what is the problem, issue, challenge), action (how do you accomplish the task), and quantifiable result/impact
- Behavioral interview questions
 - Tell me about a time when you had a conflict or difference of opinion with a colleague and how did you resolve the conflict.
 - Can you give me an example of a time when you had to give someone feedback/criticism and s/he did not respond well?



TEAM WORK/PROCESS MANAGEMENT



What Employers Expect of You

- Work well as part of a team across functional, business units locally, nationally, or globally (overcoming personality, language, cultural and time zone barrier)
- Function well both in-person or on-line
- Guidelines for successful team effort:
 - Set clear, unambiguous objective(s)
 - Follow **responsibility assignment matrix**, also known as **RACI matrix** for effective process management
 - **R**esponsible: Those who do the work to achieve the task.
 - **A**ccountable: The one who is ultimately answerable for the correct and thorough completion of the deliverable or task.
 - **C**onsulted: Those whose opinions are sought, typically subject matter experts.
 - **I**nformed: Those who are kept up-to-date on progress, often only on completion of the task or deliverable.
 - Clear, unambiguous, regular communication between team members
 - Resources readily available
 - Timeline



How to Develop This Competency

- Seek out opportunities to collaborate with other researchers locally, nationally, or globally
- Join student organizations on campus such as Graduate Student Assembly
- Volunteer in community services/organizations
- Work as a team on course projects
- Texas Venture Labs, McCombs School of Business



How to Demonstrate This Competency

- Describe a relevant experience in your resume
 - Ensure bullets show a specific task (what is the problem, issue, challenge), action (how do you accomplish the task), and quantifiable result/impact
- Behavioral interview questions
 - Can you give me an example of a time you had to work on a team and talk about both positive and negative aspects of that experience?
 - Describe a situation where you were able to motivate others to do a good job on a particular assignment.
 - Describe a situation where you had to arrive at a compromise or guide others to a compromise.



WRITE AND SPEAK WITH CLARITY AND EASE



What Employers Expect of You

- Communicate effectively within organizations and with outside audiences
 - **Written:** Written communication could apply to writing for the web, composing interoffice memos and correspondence or legal briefs, constructing employee handbooks or technical manuals or drafting performance appraisals
 - **Listening:** Employee is expected to be capable of communicating in a fluid, back-and-forth manner that engages other employees, managers, supervisors and executives alike
 - **Verbal:** Employee is expected to develop a rapport with your audience, whether they're rank-and-file employees, executives in the board room, irate customers or customers who are so satisfied they want to express their appreciation
 - **Audience:** Employee is expected to be capable of adjusting their communication style to suit the audience, detecting what their needs are and how best to deliver a message to them
- Go beyond the basics of good grammar, composition, and public speaking to include the ability to influence people from their view points to yours, or to that of your department or organization
 - The ability to communicate through persuasion and justification is highly valued

[What Do Employers Mean When They Ask for Excellent Communication Skills?](#)

InternQube: Professional Skills for the Workplace by Michael True



How to Develop This Competency

- Take every opportunity to hone and refine your writing and oral skills
 - Research papers and review papers
 - Journal club
 - Seminar
 - Poster sessions at academic conferences
 - Email communication
 - Especially grant proposals
- Consider joining toastmasters
- Develop the skill of selling
 - Attunement: Get out of your head and learn to see things from your customer's perspective.
 - Buoyancy: In sales, you face a lot of rejection--"not a pond, an ocean". Try to quickly get over it and move on.
 - Clarity: To convince someone to buy your service or product, identify the problem they're trying to solve then explain how you can help.



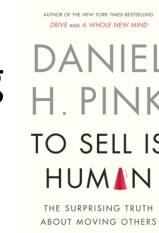
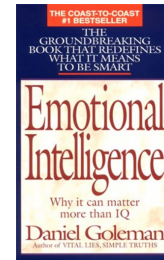
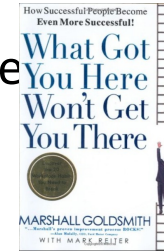
How to Demonstrate This Competency

- Resume and cover letter
- Your publications
- Interview manner: listen attentively, speak calmly and confidently, and engage with the interviewer, making eye contact and asking questions where appropriate
- Behavioral interview questions
 - Tell me about a time when you had an idea and others didn't agree with you. How did you go about convincing them to go along with you?
 - Describe a situation in which you were able to use persuasion to successfully convince someone to see things your way.



Resources on Professional Skills Development

- What Got You Here Won't Get You There: How Successful People Become Even More Successful by Marshall Goldsmith
- Emotional Intelligence by Daniel Goleman
- InternQube: Professional Skills for the Workplace by Michael True
- To Sell is Human: The Surprising Truth About Moving Others by Daniel Pink
- Crucial Conversations: Tools for Talking When Stakes Are High, Second Edition by Kerry Patterson





Professional Development & Career Support Available

- Career exploration
- Job/internship search strategies for non-academic jobs
- Academic job search (faculty and postdoc positions)
 - CV, cover letter, research statement and teaching statement
- Identifying the skills that transfer to non-academic jobs
- Converting CV to resume
- Resume and cover letter review and editing
- Interview preparation
- Networking
- Offer evaluation and salary negotiation

Po-Tsan Ku, Career Development Specialist for Graduate Students and Postdocs

Make an appointment in two ways:

- **Call the Career Services at 512-471-6700**
- **Schedule online: <https://utcns.joinhandshake.com/login>**