

Incorporating your cultural identity:

Cultural identity is identity of a group or culture or of an individual as far as one is influenced by one's belonging to a group or culture. Many students have a difficult task incorporating their Native beliefs in the Western world of science and technology.

Philosophy of Life: Mother Nature provides life, we as people understand the cycles in nature and make observations based on nature. We have a "connectedness" to nature and it creates a balance. Use this to help in your daily lifestyle as a graduate student.

Philosophy of Knowledge: Traditional knowledge is held sacred to keep our tradition and culture alive. The practice of oral traditions is one way to practice speaking in front of crowds. But there needs to be protection of this knowledge to prevent exploitation. Draw a line between sacred and shared information. Becoming a translator to speak for your people and of the scientific community can be a huge step to overcome many problems that are environmentally or humanity-related.

Philosophy of Respect: Know that elders are important to keep our traditions continuing but don't forget to learn from their teachings. It is crucial to put your knowledge aside and learn from them too. They have lived many years and have experience more than we could imagine. Respect their stories and philosophies. Elders in Western culture can be bosses, mentors and instructors, treat them with respect.

Philosophy of Well-being: Taking care of oneself mentally and physically is very important. Traditional healing practices may be incorporated with Western medicine. For the Navajos, the Diiyin Dine (Holy People) arise early in the morning, practice morning prayers and running to start the day with Holy ones.

A Western education can help the people in the community when incorporating knowledge to explain nature. Most of all don't forget where you came from. The traditional ways make you see the world differently. Use that knowledge to your advantage to understand how things work in your scientific and technology driven research/world!

Scenarios in Graduate School

1. *Should I take out a loan for graduate school?*

Answer: Science & engineering PhD programs will pay a stipend. With a budget, you can survive! A small loan can be taken out but the stipend should provide **enough** money to cover: rent, utilities, groceries and transportation.

2. *I really like the research in two labs. Which should I pick?*

Answer: Here are a few factors you should consider before joining a lab: 1) lab funding situation (will you be teaching part-time or researching full-time), 2) is the PI tenured (pressure to publish for them creates many pressures for you), 3) how do current students like their PI, 4) is the publication track reasonable, 5) will you see your PI or report to a post-doc and 6) how large is the group and space of the lab?

3. *Should I do a PhD or Masters program?*

Answer: A masters degree is closely related to a BA or BS degree. The only difference is the coursework. In a PhD you take the same classes and don't have to pay for tuition because you will be teaching courses in the department. A PhD is a great investment.

4. *I want to join a lab, how should I approach the PI?*

Answer: Email or call the PI to set-up an initial meeting. Read their recently published journal articles to discuss future projects. Ask questions about lab funding, space, mentoring, research areas, post-graduation jobs and personality compatibility.

Scenarios as a Post-doctoral Fellow

1. *How do I find a post-doc position?*

Answer: Networking is the best. Start a year in advance for your search. Keep an updated CV to email. Meeting PIs at conferences or through faculty helps them see your work and meet you in person.

2. *What is it like to interview?*

Answer: There will be a seminar (30-45 min) of your thesis work to present to the lab of interest. Bring to scope your current special skills that will benefit the program. Full day interview with people from the department or lab.

3. *Should I do only a traditional research-only postdoc?*

Answer: You can teach while conducting research in a post-doc. The PI of the lab will need to be consulted because you may be a manager of graduate and undergraduate students which leaves little time for teaching. Discuss ahead of time the opportunities available in the department or university.



Make the best of graduate school to land that next opportunity a postdoctoral position

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Graduate School Expectations:

First law of Thermodynamics: "You can't get something for nothing." Students will plan, design and execute experiments while become experts in their field. The course of their graduate studies will depend on their work.

PhD programs range from 1-7 years:

1st

Teaching assistant, coursework, qualifying exams, lab rotations

2nd

Choose an advisor, develop research project, find a committee, start research

3rd+

Research, research, research, writing manuscripts, attend conferences, mentor

Time Management Tips:

Keep a calendar and write your schedule out every week to keep on tasks. Plan to check your email at certain times throughout the day to prevent disruptions. Sign up for reminders on your journal subscriptions for updates of current research publications.

Networking:

Practice your self-introduction, idea of a one-minute elevator talk. Risk rejection and approach others. Use a sense of humor responsibly. Don't be afraid to join a group of people talking. Wear your nametag on upper right shoulder area because a handshake allows the person to easily view your name. Arrive early to events and thank the host. Be kind and do not end the conversation after the exchange of information or business cards. If you have to leave, excuse yourself politely.

Communication Skills:

Practice writing out a speech and speaking out loud in front of a small crowd. Be comfortable pronouncing terms and projecting your voice. Have confidence and wear thick skin. Criticism will happen in any field. Attend Toastmasters, a public speaking group. Sign up for networking events to meet people in your field. Dress professional, shake hands and be polite. Practice email etiquette, *REPLY* and *REPLY ALL* for certain items, always write complete sentences and use spell-check. For appointments, be five minutes early. If it is an unfamiliar building, go the day before to make sure you won't get lost or confused when looking for a classroom or office.

Post-doctoral fellow Expectations:

A post-doctoral position is very similar to grad school except you will further deepen expertise in your field with independent research, incorporating managerial skills, acquiring novel skills and methods.

Finding the lab!

Select a position that EXCITES you! You must enjoy the work to keep up the momentum of research. **Select a lab** that suits your work and lifestyle. Does the location of the laboratory and the surrounding environment satisfy your non-work interests? Is the lab setting you up for your next step, i.e. going into academia, government lab or private industry? **Select a project** that develops new skills. New skills increase your marketability. Balance this against the need to ultimately be recognized for a particular set of contributions. Negotiate first authorship before you START a project. You want to be published for work to help the next step in your career and gain funding. Find a post-doc position for a minimum of two years and maximum of five years at a lab. Some research may need more years but the PI should not keep you too long you need to find your career path. Create a list of pros & cons for each lab you are interested. Don't forget to become a mentor for graduate, undergraduate and high school students!

Find your own funding opportunities! You will have more independence and an important extra line on your resume! Look out for postings nationwide or at your local institution.

You are a **great asset** going into the lab and don't sell yourself short!!

Post-Doc Benefits: Loan repayment, healthcare, vacation

A post-doc position is a real job that comes with benefits! Travel to conferences to present your work can happen too! You will get a higher wage with every year of experience. Healthcare and vacation time should be included in every postdoc position. The National Post Doc association has paved a path for all scientists and researchers. Loan repayment for undergraduate and graduate times can be deferred.

Things You Can Do To Prepare for Graduate School:

- * Define your goals and create a work ethic
- * Find your **passion** in the sciences, technology, engineering or math fields
- * Keep your grades up in your math and science courses! Get a tutor if you need help.
- * Take a GRE prep course or create a study group in your department with classmates
- * **Participate in REU programs** at your undergrad (during the school term or summer) and also at another academic institution or internship at a company
- * **Attend conferences** to present your work and begin networking
- * Tutor or become a teaching assistant in your department. These early teaching methods will prepare you for the course you may teach your first year.
- * Take a course that is outside of your major, interdisciplinary studies is the direction of most research
- * **Find a mentor** in your undergraduate department to help you find your path, give feedback for cover letters and REU applications

Helpful websites:

Berkeley Career Center:

<https://career.berkeley.edu/Grad/GradWhatis.stm>

Stephen C. Stearns, Ph.D.

<http://www.eeb.yale.edu/stearns/advice.htm>

The grad cafe

<http://forum.thegradcafe.com/>

The Chronicle of Higher Education

<http://chronicle.com/section/Home/5>

About the Speaker:

Joslynn Lee (Navajo/Acoma Pueblo/Laguna Pueblo) is a graduate student at Northeastern University and plans to start soon as a postdoctoral associate at University of Minnesota Medical School Duluth campus (Duluth, MN) in the lab of Dr. Matt Slattery with a focus on understanding protein structure and function computational chemistry techniques. Joslynn is an AISES Sequoyah Fellow and 2010 NSF-GFRP recipient. Fort Lewis College (Durango, CO) graduate 2006.

