Career Options in Sciences: Academia and Industry

INNOVATION RESEARCH LAB WORKSHOP

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Objectives and Content

Main objectives of this workshop:

➢**Clarify on degree types and career types in STEM careers**

➢**Suggest ways to discover what STEM career path you would like to take**

Content covered in this workshop:

▪**Degree options – What does it take?**

▪**What does a career in academia mean?**

▪**What does a career in industry mean?**

▪**What does a career in engineering for the government mean?**

▪**Interviews with people that followed STEM careers**

▪**Suggestion for an approach on how to find out what to do with your career**
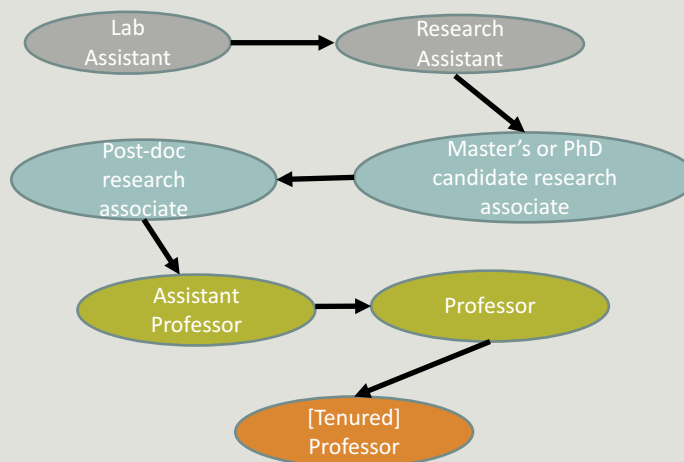
Degree options – What does it take?

Bachelor's degree

- 4 years
- $$
- Have to have an idea of what you like/want

Master's degree

- About 2 years
- $$$
- Have to have more clear what you like want – short thesis

PhD

- About 5-6 years
- $ depends
- Really must have a passion – heavy, long, thesis

What is a Career in Academia?

An academic institution is an educational institution dedicated to education and research, which grants academic degrees. (Wikipedia)

Perform research, using grants funded by the government or by foundations. Teach and from people

Lab Assistant → Research Assistant

Research Assistant → Master's or PhD candidate research associate

Master's or PhD candidate research associate → Post-doc research associate

Post-doc research associate → Assistant Professor

Assistant Professor → Professor

Professor → [Tenured] Professor

What is a Career in Industry?

"Industry" is collectively referred to the "private sector", and they're "for profit":

- **Startups – funding comes from investors**
- **Public companies – funding comes from shareholders**

Startups →
- One role, but usually many hats
- Risky
- Exciting
- In general, higher paying, few benefits

Public companies →
- Very defined roles
- New learning opportunities may be reduced
- Less risky, in general
- May or may not be exciting
- In general, lower paying, but great benefits

What is a Career in Industry? (cont'd)

- The career ladder in industry is different than in academia

- Positions will vary according to the STEM field you're in. Examples:

  - **Field positions:** You don't work in an office, you work on site where equipment you have expertise in is at, as a representative of your employer. This may require travel, typically.

  - **Managerial positions:** You will manage people, while being knowledgeable in the field of the people you're managing.

  - **Non-managerial positions:** You work in your field, and your title may change according to the level of knowledge or experience you have.

What is a Career in a Government Institution?

This might be of particular interest to those looking into engineering

Government Institutions include city, state and federal offices. Each will vary in their rules and what they offer. Budgeting for positions and what can be done will depend on the current office at each level.

Degrees typically sought for government positions:
- Bachelor's degree in Science of Engineering
- Degrees in Computer Sciences
- Degree in Genetic Engineering

Interviews

➢Interview with Carlos Garcia, Chief Technical Officer at Rakuten Aspyrian https://youtu.be/9XTZNyHdXz0

➢Interview with Ahiram Rodriguez, Associate Scientist at Rakuten Aspyrian https://youtu.be/H8_qbLN3_4g

➢Interview with Melissa Carrillo, Clinical Programmer I at Samumed https://youtu.be/c6Xym-dBvlU

➢Interview with Jesus Zaragoza, GxP Systems Supervisor at Navigate BioPharma, A Novartis Company https://youtu.be/mT8zTnu8Nj0

Next steps – Look at Job Positions and Network

Job search engine examples:

➤ Glassdoor

➤ Indeed

➤ Monster

➤ LinkedIn

➤ Choose a company you think is interesting and look at their available positions

➤ Many more search engines, some sector-dependent
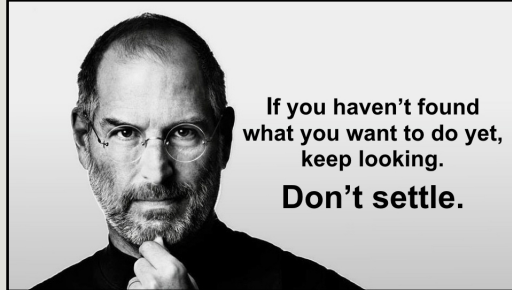
When you look at the positions, pay attention to:

➤ Experience needed
➤ Titles/Degrees needed
➤ Do you see yourself doing this? (not just focus on if it sounds cool –do you *really* see yourself doing this?)

Networking

➤ Look for professionals that work in the field you're interested in and ask them for an **informational interview**
➤ Look at your University's resources

Questions?

Thank you!

If you haven't found
what you want to do yet,
keep looking.

Don't settle.

Additional Resources

- Check your School's resources
    - Career Resources
    - Mentoring programs (e.g. Aztec Mentor Program at SDSU)

- Societies of the profession your interested in
- Internships