BINGHAMTON UNIVERSITY
STATE UNIVERSITY OF NEW YORK

Translating Academic Skills and Searching for Non-Academic Careers

Fleishman Center for Career and Professional Development
binghamton.edu/ccpd

Today's Presentation

Goals:

- Learn what skills employers in non-academic careers/industries seek
- Learn to articulate skills in non-academic language
- Learn job search resources and tips, including what to search for, how to search, documents and resources

General Skills Employers Seek

Critical Thinking/Problem Solving

Oral/Written Communication

Teamwork/Collaboration

Information Technology Application

Leadership

Professionalism/Work Ethic

Career Management

Global/Intercultural Fluency

- National Association of Colleges and Employers

Transferable PhD Skills

Project skills:
Project management
Managing budgets
Team working
Problem solving
Organizing meetings and events

Entrepreneurship:
Thought leadership
Innovation
Bidding for funding
Networking
International experience

Communication skills:
Writing
Public speaking
Languages
Stakeholder management

Knowledge and information skills:
Research
Teaching and training
Managing data and information
IT applications and programming languages
Writing reports

Steps to Identifying Relevant Skills

1. Research the new field
   - Learn the lingo
   - Understand how they measure a strong candidate
2. Review job postings
   - Identify common themes/needs
   - Pay attention to how skills are labeled
   - Jot down possible ways you have used these skills in the past
3. Review your resume
   - How can you reflect similar language?
   - You'll need to translate from the language of academia to the language of the new industry

Informational Interviewing!

- Learn what other PhDs in your field are doing
- Use LinkedIn to network with people:
  - In fields of interest
  - With similar backgrounds as you
  - Who work for your dream employer
  - Who you know!
- Conduct informational interviews

Self-Reflection

Skills:

- What skills do you possess?
- What skills do you *want* to use?
- Where/how might those skills be useful?
- How do those skills relate to what you've discovered about the new career field?
- How do your skills uniquely qualify you for the position?

The non-academic job search

(and how it differs from the tenure-track process)

Academic

- Curriculum Vita (CV) showcasing all relevant work
- Lengthy cover letter
- Scholarly work is valued
- Large search committees
- Timeline coincides with academic year
- Extensive portfolio of work is required

Non-Academic

- 1-2 page resume highlighting most relevant skills & accomplishments
- 1-page cover letter
- Experience is valued
- Smaller (or no) search committee
- Timeline is dependent on organizational needs
- Only relevant samples of work necessary

Remember!

- You need to demonstrate that you are TRULY interested in the position!
  - It's not a temporary backup until you find an academic position
- The job search process is like sales - they're buying, you're selling!
  - Understand what they're looking for and sell them THAT

Resumes

- You will likely need a resume, not a CV
- Use Fleishman Center and Watson Career and Alumni Connections resources to rewrite your CV to meet resume expectations
- Be sure to tailor your resume to the employer's needs.
  - Showcase relevant skills & accomplishments
  - Change language that is specific only to your PhD area of study to language that is more universal
- GET FEEDBACK!!
  - From Watson Career and Alumni Connections and/or Fleishman Center

Cover Letters

- Cover letters should never be more than one page
- Use Fleishman Center resources (Cover Letter Guide, walk-ins, appointments) for information and feedback
- Customize the cover letter to the employer to explain EXACTLY why you are interested in THEIR position and how you meet their needs
- No mail merges / form letters allowed!
  - GET FEEDBACK!!
    - From Watson Career and Alumni Connections and/or Fleishman Center

Interviewing

- Interviews tend to be shorter in non-academic environments
- “Job talks” are not a thing in industry
- Avoid the biggest mistake candidates make and learn as much as you can about the employer, department and position prior to your interview!
- Practice interviewing
  - Big Interview – online software with searchable database of thousands of pre-recorded interview questions. Use your webcam to record your own answers (*access this resource through the “Career Center” tab in hireBING by Handshake*)
  - Watson Career and Alumni Connections and/or Fleishman Center Mock Interviews – schedule through hireBING by Handshake.

Finding Opportunities

- Networking – the #1 way people find jobs!
  - Via LinkedIn and in-person
- hireBING by Handshake
- Indeed.com
  - Search by keywords (skills, PhD, etc.)
  - Subtract unwanted terms (i.e. –professor)
- Dice.com – all tech all the time
- Association websites
  - ASME: American Society of Mechanical Engineers
  - NSPE: National Society of Professional Engineers

Sample ME PhD-Level Jobs

Senior Mechanical Engineer
Paragon Solutions

Design Engineer – Integrator Analyst
ASML

Process Project Leader
Corning

Combustion CFD Methods Specialist
Rolls-Royce

Launch Integration Specialist
SAIC

Noise & Vibration Programmer
Apple

CFD Engineer
Boston Children's Hospital

Advanced Mfg Engr
Amazon.com

This CFD Engineer will be responsible for:

- Collaborating with the Principal Investigators and clinicians to develop patient-specific cardiovascular models and to use these to conduct computational fluid dynamics simulations to inform clinical decision making.
- Applying strong analytical and experimental skills to support the application of computational modeling and engineering analysis to ongoing clinical challenges in our cardiac patients.
- Using state-of-the-art CFD software (Fluent, SimVascular, etc.) to simulate and analyze flow through patient-specific models of cardiovascular anatomy.
- Designing and conducting benchtop experiments to complement and/or validate computational modeling studies.
- Partnering with cardiologists, cardiovascular surgeons, and nurses to obtain patient data necessary for quantitative modeling.
- Collaborating with lab staff, clinicians, and statisticians to design experiments and write protocols.
- Performing statistical analysis of experimental results.
- Preparing oral and written reports for presentation at technical conferences and for publication in scholarly journals.

To qualify you must have:

- MS degree in mechanical or biomedical engineering or computer science required, PhD preferred.
- Expertise in fluid dynamics and numerical methods for solving its governing equations.
- Experience conducting computational fluid dynamics analyses using Fluent or similar CFD software, and experience with cardiovascular applications is a plus.
- Demonstrated solid knowledge of the mechanics of soft tissues.
- Programming proficiency in one or more scientific computing languages (e.g., Matlab, Python, etc.).
- The ability to communicate effectively, both orally and in writing, with both medical and engineering personnel and be able to work with diverse internal and external constituencies.