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# An Introduction to Career Pathways

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Design Document

*60 slides*

Version 1.0

**Submitted by**

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## An Introduction to Career Pathways: Design Document

The ACS Office of Graduate and Postdoctoral Scholars and the Department of Career Management and Development are jointly sponsoring a project to update and possibly upgrade the series of modules now titled "Preparing for Life After Graduate School" (PFLAGs). The working title for this revised program is "ACS Career Pathways."

An initial Learning System Architecture (LSA) for the new learning system has been developed and is in process of final revision. The purpose of this document is to describe the instructional design for the "core" program in the learning system, tentatively titled "An Introduction to Career Pathways."

### Assumptions

The workshop described in this document was shaped by the following assumptions:

- The workshop will involve from three to four hours of learner contact time.
- The workshop will be led by a trained facilitator, in most cases an ACS career consultant who has completed the required leader training program. One of the more experienced career consultants will be delivering the pilot version of the program.
- The optimal size of each group will be 12 to 15 participants, but the workshop will be designed to be successful with as many as 25. *— more at Nat'l meeting*
- The workshop will need to be able to be delivered either as a standalone module, as a "front-end" to one or more of the tracks, or as a component of another ACS offering, such as ACS on Campus, for example.

### Audience

- The audience for this workshop includes people with formal training in chemistry from the B.S. level all the way to the Ph.D. with postdoctoral experience.
- What all of the members of the audience share in common is some uncertainty about what career path they want to pursue and an interest in understanding more about the career options that are available to chemistry professionals.
- At some point in the future, we may want to add a component to this workshop presenting another career pathway, K-12 education. That aspect of the core (and its associated track) is outside the scope of this workshop.

### Instructional Objectives

By the end of the workshop, participants will be able to:

- Conduct a personal inventory of values and competencies, and describe how that inventory might shape a career search.
- List the four main career pathways open to chemistry professionals.

- Describe each pathway in terms of job market trends and conditions in that pathway, the kinds of organizations that hire chemists, the kinds of jobs available, the typical career paths, and the advantages and disadvantages of working in that career path.
- Describe the place of networking in a career search, and practice a networking conversation.
- Plan the next step in their career search.

## High-Level Overview

This workshop will be structured in terms of an Introduction and three main sections:

- The Workshop Introduction opens with a grabber activity, and then outlines the main considerations that should shape a search for a career. It provides a high-level overview of the job market for chemistry professionals and outlines the main structure of the rest of the workshop.
- Understanding Myself provides participants with a framework to analyze their own values and strengths (especially strengths in non-technical areas).
- The Four Main Career Pathways is the longest section of the workshop. It describes each of the four main career pathways for a chemistry professional in terms of employment trends and the types of the kind of organizations in that pathway that employ chemists. It also provides a high-level overview of the typical jobs responsibilities in that pathway, and the advantages and disadvantages of a career in that pathway. It also describes the outlook for jobs in each pathway. The four main pathways are:
  - Working in Industry
  - Working in Academe
  - Working in Government
  - Working for Yourself
- *Setting Your Direction*  
~~Locating a Job~~ helps set up the next steps for the decision making process, including job locating resources and how to conduct a networking conversation.

## An Introduction to Career Pathways: Detailed Design

The rest of this document describes the proposed workshop in more detail, learning activity by learning activity.

### Workshop Introduction (0:10)

- *Objective?* "What Do You Want to Do. . .?" (opening activity, 7 minutes). The facilitator asks participants to write a short description of the kind of position they would envision themselves working in as their next job in industry. After a minute or two, the facilitator puts participants into pairs or triads to compare notes. The debrief of the activity looks at how specific each person was able to be about a job target, and the implications of

that for mounting a successful job search. The principle is that the more you know about what you're looking for, the more success you will have in finding it.

- Workshop Introduction (presentation, 3 minutes). Three main dimensions (rendered as a Venn diagram) showing where self (values and interests), personal strengths, and job market opportunities intersect. The facilitator provides a quick overview of this session.

### **Understanding Myself (0:40)**

- Articulating My Personal Values (presentation, 5 minutes). This section of the workshop addresses the "self" dimension of the Venn diagram. The facilitator describes a set of six values that should shape a decision about a job and a career path.
- Assessing My Personal Values (individual to pairs activity, 10 minutes). Each participant completes a personal assessment, then discusses with a partner the implication of the results on his or her job search, guided by a set of focusing questions.
- Articulating My Personal Strengths (presentation, 10 minutes). Focus on non-technical skills. This competency model needs to be aligned with the one we reference in the Interviewing workshop.
- Assessing My Personal Strengths (individual to pairs activity, 15 minutes). In this activity, participants will use a competency model (to be determined) to assess their personal competencies (these are non-technical competencies, not skills in chemistry, per se). As with the values activity, they will debrief this assessment first in terms of a set of focusing questions, and then with a partner.

### **The Four Main Career Pathways (1:10)**

- Working in Industry (presentation, 10 minutes). The main topics covered in this presentation include:
  - *current!* The trends and overall employment picture for chemistry professionals in industry.
  - The types of industrial companies that hire chemists (pharmaceuticals, process manufacturing of all kinds, foods, coatings, adhesives, etc.)
  - Examples of careers in industry (both bench scientist and "alternative" careers, such as sales and marketing, patents, technology transfer, information management, etc.).
  - What a typical career path looks like, and typical daily responsibilities. Typical salaries. *benefits*
  - Advantages and disadvantages of working in industry.
- Imagining Yourself in Industry (individual to pairs activity, 8 minutes). Participants return to their inventory of values and competencies, and calibrate the goodness of fit between themselves and this career path (with emphasis in this case on which

industry and which functional area in that industry). They then discuss their conclusions with a partner in terms of a set of focusing questions.

- Working in Academe (presentation, 10 minutes). The main topics covered in this presentation include:
  - The trends and overall employment picture for chemistry professionals in academe.
  - The types of academic institutions that hire advanced-degreed chemists: Doctoral/research, Masters, Baccalaureate, Associate and Specialized Institutions.
  - What a typical career path looks like. Typical salaries. *benefits*
  - Typical daily responsibilities. Teaching, research, service, and how those are balanced according to type of institution. *non-tenure track, adjunct, provost/dean*
- Imagining Yourself in Academe (individual to pairs activity, 8 minutes). Participants return to their inventory of values and competencies, and calibrate the goodness of fit between themselves and this career path (with emphasis in this case, which type of academic institution). They then discuss their conclusions with a partner in terms of a set of focusing questions.
- Working in Government (presentation, 10 minutes). The main topics covered in this presentation include:
  - The trends and overall employment picture for chemistry professionals in government.
  - Examples of careers in government (federal, state, local)
  - Resources for finding governmental jobs *S*
  - Getting hired (the governmental job process) *advantages & disadvantages, NGOs*
- Imagining Yourself in the Government (individual to pairs activity, 7 minutes). Participants return to their inventory of values and competencies, and calibrate the goodness of fit between themselves and this career path. They then discuss their conclusions with a partner in terms of a set of focusing questions.
- Working for Yourself. (presentation, 10 minutes). The main topics covered in this presentation include: *really always are working for yourself*
  - The trends and overall employment picture for chemistry professionals in entrepreneurial ventures.
  - Examples of entrepreneurial and consulting careers.
  - The process of starting your own company.
  - The typical responsibilities of an entrepreneur.
  - Advantages and disadvantages of a career as an entrepreneur or consultant. *building up on the side, conflict of interest, setting rates, focus*

- Imagining Yourself as an Entrepreneur (individual to pairs activity, 7 minutes). Participants return to their inventory of values and competencies, and calibrate the goodness of fit between themselves and this career path. They then discuss their conclusions with a partner in terms of a set of focusing questions.

### Locating a Job (0:50)

- Locating a Job (presentation, 10 minutes). The facilitator describes some resources and strategies a job seeker can use to identify job openings—both ones that are posted and those that are “hidden.”
- Networking and the Networking Interview (presentation, 10 minutes). How to network as a main tool to locate potential job openings. The facilitator then describes the purpose and structure of a “networking interview” as a tool to target and focus a job search. How to prepare for a networking interview, and suggested questions to ask during the interview. How to follow up on an interview.
- Practicing the Networking Interview (pairs activity, 15 minutes). In pairs, participants practice doing an networking interview with a partner about the partner’s current (or previous) search—regardless of the stage the job search is in. The interviewer will be provided with an Networking Interview Worksheet on which to take notes. This activity serves as both a summary of the workshop and a format for application planning.
- Next Steps: Creating a Personal Development Plan (individual application planning, 15 minutes). Participants return to the Venn diagram and the assessment work they had done in connection with each of the career paths. They develop a hypothesis about which career pathway(s) might be most appropriate for them, and then make notes on how they plan to test that hypothesis.

Why more jobs  
are hidden now



and gather more info