

Résumé Preparation — Tips for Chemical Professionals

Preface

This guide is intended to help you make the best possible first impression on a potential employer. It is based on various résumé writing sources and interviews with industrial recruiters, who offer their best advice on how to craft attention-getting résumés. (See the resource list.)

Creating the perfect résumé is part science, part art — and a lot of hard work. You must be willing to spend considerable time reflecting on your skills and accomplishments, formulating career goals for your future, then composing and editing the document(s). Because this important tool is used to get you an interview with a potential employer, it should be clear, accurate, and concise. Your résumé outlines your career objective and/or highlights of your career to date, education, major skills and accomplishments, work experience, references, and other items. Its purpose is to convince a potential employer that you're an outstanding candidate who will make positive contributions to their organization.

A résumé — the focus of this guide — is usually used to apply for industrial and corporate positions. A curriculum vitae (CV) is needed for academic situations, and a federal government résumé is required for government employment. These alternative formats are discussed separately.

As you read this guide, keep in mind that if you talk to 10 different people, you'll probably get 10 different versions of what to put on your résumé. Formats vary, as do personalities. Your primary goal is to communicate enough information about yourself to prompt an interview.

After you have created your résumé, written your curriculum vitae, or filled out your OF-612, take advantage of the many professional and employment services offered by the ACS.

Disclaimer

This guide is meant to serve as a basic information resource on résumé preparation for chemists. Information was compiled from published sources that we deemed reliable (see the resource list). Readers should consult the appropriate authorities for additional information or assistance beyond the scope of this guide. The American Chemical Society (ACS) does not guarantee employment to any reader of this document or accept responsibility for setting standards with regard to any topic discussed herein. ACS and the authors, contributors, and reviewers also are not responsible for the accuracy of information obtained from other sources

The Power of a Résumé

Consider how dramatically the world of work has changed in the past 10 years:

- The explosion in new technologies—desktop and laptop computers, smart phones, the Internet, and wireless technologies—means no boundaries. You can work from almost anywhere.
- A global economy means the elimination of barriers to entry for most businesses and products. However, finding customers all over the world also means competing with companies based in foreign countries.
- The Internet hasn't replaced the job search process but enhanced it. Social networks—LinkedIn, Twitter, and Facebook—are increasingly used to uncover and advertise potential job openings. Job boards that are targeted to your skills and experience can help you focus your search.

With the changes in the job market, and how companies are posting open positions, what you did 10 years ago to find a job likely won't work as well today—and that includes your résumé.

Although the environment has changed, the résumé is still the primary tool for obtaining a job. In a competitive job market, especially in an economic downturn, you want to set yourself apart from other, equally qualified, candidates. Your résumé must clearly communicate the value you can bring to a potential employer.

Your résumé is your calling card. It is also a powerful tool that can land you interviews that can lead to job offers. For that to happen, your résumé must be found and read by potential employers, persuading them to contact you. That's a lot for one document to accomplish.

As a technical professional, you must present your background and experience in a way that matches the potential employer's needs. You may be well qualified, but in a slow economy and increasingly global marketplace, the most qualified person doesn't always get the job. The person with the best job search skills, including an effective résumé, is the one most likely to land that coveted position.

The format of your résumé must follow some general guidelines. There are two basic formats: chronological and functional (or skills-based) résumés. As the name denotes, a chronological résumé presents your work history sequentially. You may prefer a skills-based résumé, which allows you to emphasize what you can do, immediately focusing the employer's attention on your capabilities and de-emphasizing any career gaps or job changes.

With this in mind, we present the basic components of all résumés, discuss how you can construct the best résumé possible, and present some excellent examples of résumés and cover letters. Knowing how to avoid common stumbling blocks in résumé preparation will put you on the right track.

Design Considerations

Because a résumé is a personal introduction to a potential employer, it should convey a lasting, positive first impression. A well written résumé is clear, logically organized, and attractive —



both professional looking and easy to read, as summarized on the next pages. Keep in mind that this is the first impression the new employer will have of you — craft it carefully to make sure it's not the last! Your résumé won't be read if it is illogically organized, messy, difficult to read, or much too long or too short.

How you design your résumé is as important as how it's written and affects how quickly and easily the reader understands the value you bring to an organization. Your goal is to provide meaningful information in a format that is easy and quick to skim.

From an employer's point of view, the purpose of a résumé is to screen out applicants who don't fit. The average review time for each résumé is about 20 to 30 seconds and the first seven seconds are crucial.

- Keep it brief—2 pages maximum—but comprehensive enough to convey your important skills and significant accomplishments.
- Leave ample “white space” for readability. Allow at least a 1-inch margin all around to create a visual border and leave room for notes; add spaces between bullets, paragraphs, and sections as well.
- Choose a typeface that is standard on most computers. Résumé writing experts recommend Arial, Garamond, Tahoma, Times New Roman or Verdana, for example.
- Use a readable type size, 10 or 11 point font depending on the type face. However, 10 point is too small in some fonts, like Times New Roman, while 11 point is too large in others, like Verdana.
- Use headings to highlight the major sections of your résumé. Use boldface type and a larger font size for emphasis.
- If you're formatting your résumé for electronic scanning, use minimal formatting. For example, use asterisks instead of bullets and all caps instead of boldface.
- Specific is better than general. Use bullet points to help the reader skim through the résumé. Limit yourself to four or five bullets per list.
- Concise is better than verbose. Keep your paragraphs short, no more than three or four lines. If the text is too dense, readers will skip over it. Break the information up or take out irrelevant information to shorten the copy.
- Accurate is better than “creative.” This document must sell your capabilities clearly and honestly, so resist the temptation to exaggerate, overstate, embellish, or brag. Potential employers can verify your history; even the slightest misrepresentation can cost you an interview — or a job.

Your Résumé Portfolio

A résumé is never sent alone. It is always accompanied by at least a cover letter, and often a publication list, research summary, and other documents. These additional documents are covered separately.

Government and Academic Positions

Government résumés tend to be longer than average because the federal government requires more information about the candidate. Fortunately, the federal government has put the



application process online. Curriculum vitae also are longer, calling for greater detail and publication lists.

The Structure of a Résumé

While there's no single "formula" to create a good résumé, all résumés have a basic framework to present your experience, accomplishments, and credentials. The introduction includes the heading, your job objective or summary, and highlights of skills and experience you don't want the reader to miss. The background consists of your experience and accomplishments, your educational credentials, foreign language proficiency, and any technology skills. Supporting information is where you list "extras" such as publications, presentations, and professional affiliations, including any leadership roles or other assignments.

How you put together the various parts of your résumé to market yourself effectively will depend on your situation — that is, whether you are a recent graduate or an experienced chemical scientist. For the most part, the basic components remain the same, as described in the following subsections, and only the order of the sections changes. See the examples for more specific details.

Heading

Here's an obvious question: How easily can an employer reach you? Don't send employers on a scavenger hunt for your contact information or worse, include so much contact information on your résumé that they don't know which method to use first.

The heading of your résumé should include:

- Your name
- Address
- E-mail address
- Phone number

Center your name, home address, phone number(s), and personal e-mail address at the top of the page. (Remember that a company e-mail account is not private.) Make sure your e-mail address sounds professional, such as john.williams@gmail.com. If you must hang on to "skydivingrox@hotmail.com" then set up a separate e-mail address solely for your job search.

Provide daytime phone numbers if possible, unless you're permanently employed and can't receive personal calls discreetly at work. In that case, use your home phone number. You can also include a cell phone number. Make sure that any phone numbers or e-mails are checked regularly and answered professionally.

Job Objective: Yes or No?

A good objective should clearly identify the type of work you are seeking and provide a sense of your professional direction. The objective defines who you are, your expertise and skills, and demonstrates how you might fit within a company. However, there are arguments for and against using an objective.

An objective is useful, for example, when you're making a career change to communicate the types of jobs you are interested in. Or perhaps you're a new graduate without a lot of work experience and you want to tell employers what kind of work you're looking for. If your work experience is varied, an objective can clarify your interest and direction. An objective can also alert the reader to your key qualifications. Finally, you can tailor an objective to fit a specific position and organization without having to change the rest of your résumé. For example:

- A position as an organic chemist taking advantage of my knowledge of medicinal chemistry and organic synthesis.
- A research and development position in the pharmaceutical industry that takes advantage of extensive experience in synthetic organic chemistry.
- A position requiring analytical skills in wastewater management to improve environmental operations.
- A senior marketing research and planning position that calls for strong analytical, technical, and creative skills.

On the other hand, an objective can be an exercise in creative writing, resulting in vague statements like, "Seeking a challenging position with the opportunity to advance..." An objective can narrow your options because an employer may conclude that you wouldn't be interested in other job openings at that company. An objective can also send the wrong message to the reader by communicating only what you're interested in, such as:

- "To join a group to reach new horizons in productivity and growth"
- "A management vs. research position"
- "Organic chemistry position in drug discovery vs. other positions for organic chemists"

Summary Statements

Alternatively, you can write a summary statement that emphasizes your professional expertise and provides a strong introduction to your résumé. A summary establishes the benefits you bring to a company and why you are the best candidate for the job.

The summary is typically a short paragraph of your professional qualifications. You don't have to call it a summary; you can call it a Profile, an Introduction, or an Overview. You can even use a headline that brands who you are. A summary can include all or some of the following elements:

- A headline that establishes who you are and your expertise: "R&D Project Manager"
- A statement that "brands" you: "Experienced technology leader and manager of processes that achieve increased business value."

- A brief paragraph or two that summarizes your professional qualifications: “Valuable contributor and consistent quality performer with executive-level experience in strategic planning, decision-making, and team leadership. Creative thinker and intelligent problem-solver who can hit the ground running and is eager to tackle new challenges. Able to build internal support to deliver exceptional results. Skilled interpreter of customer needs resulting in enhanced customer service.”
- A list of your core skills: “Strategic planning. Project Management. Customer Satisfaction. Team Leadership & Management.”
- A list of two or three career achievements: “Wythe Polymers, Inc.: Managed a portfolio of R&D projects that focused on the commercialization of new resin products for the global composites industry.”

Highlights

If you elect not to use an objective or a summary, you can add a highlights section instead. Sometimes this section is referred to as accomplishments or key qualifications. This section of the résumé guides the reader’s attention as he or she reviews the résumé, brings some of your skills or experiences to the forefront, and offers you the chance to present the “entire package.”

Here are some well-written examples of a highlights section:

- “Experienced in the synthesis, purification and characterization of organic compounds”
- “Skilled in identifying and preparing novel materials for use in fuel cells”
- “Adept at preparing fuel cells having high efficiency and extended shelf-life”
- “Originated techniques for detecting energy loss sites in photo-electric membranes”
- “Proven team leader with excellent interpersonal and communication skills”

Background

The background section is the “body” of your résumé and is the longest section. The most important information in the background section is your education and your previous research and work experience. You always lead with your strongest material, so work experience should come first if you’ve been in the work force for a time. Otherwise, lead with education.

When you’re ready to write your résumé, start by listing and classifying your skills and achievements. Group these items under functional headings that reflect your skills, for example:

- Technical
- Business
- Teamwork
- Communications
- Management

This valuable exercise can be rather time consuming. In fact, it’s best if you start a list and jot down each item as you think of it, over several days or weeks. Share your list with a former colleague or a friend and ask if they can add accomplishments you might have overlooked.

Once you list all your skills and accomplishments, think about which skills (for example, in technology, communication, leadership, or special kinds of instruments/equipment) have led to each accomplishment. Then assign each accomplishment to one or more skill categories as your subheadings.

Every achievement on your résumé should have a corresponding metric, such as "helped produce revenues of \$2.3 million," "increased customer base by 17%," or "reduced product reject rate by 33%." If you can't come up with a number, you can still describe the benefit you provided, such as "identified profitable new markets." Your achievements should help the employer answer the question, "What's in it for me?"

You want to emphasize your transferable skills — what you can and want to do for the new employer. Nothing proves that you can do something as well as showing that you have done something similar in the past. Technical skills are most important, but non-technical skills (oral and written communication, the ability to work on teams, and so on) are also important.

Avoid using the first person pronoun ("I," "me," "my") since the résumé is obviously about you. Use the active voice wherever possible in framing your skills and accomplishments:

- "Broad knowledge of . . ."
- "Experienced in . . ."
- "Proficient in . . ."
- "Adept at . . ."
- "Proven track record in . . ."

Here are a few examples of skills, and the specific accomplishments that validate those skills:

Project Management Skills

- Led a staff of 10 technical personnel in reviewing, evaluating, and validating analytical data for more than 30 new product development programs.
- Designed efficient databases for organic and inorganic analytical test results, reducing annual IT costs by 12%.

Analysis/R&D Skills

- Prepared and analyzed volatile and semi-volatile compounds using GC/MS.
- Developed an efficient synthesis (85% overall yield) of sucrose derivatives.

Modify the list until you believe it best reflects your experience. When you're finished, you will have a list of your skills, backed up with concrete examples of your accomplishments, to help you compose your résumé, write cover letters, and prepare for interviews. Be as specific and quantitative as possible in identifying your accomplishments. Vague statements will not hold up to scrutiny.

Work History

When you present your skills and accomplishments in your résumé, list your positions in reverse chronological order. Each entry should have the names and locations of your employers, your dates of employment, your position title, and key accomplishments. (If the company has changed names, you may need to include “formerly known as” or “currently known as” names.) You can list the dates of employment as months and years or years only. Using years only is cleaner, less cluttered, and disguises any gaps in employment. If you are asked to fill out a job application, you may be asked for months and years so keep that information at hand.

If you are a recent graduate, you can format the information your research and thesis as work experience. Don't just copy your thesis abstract, but convey the main points in short descriptive phrases.

Explain why your research is unique, and try to illustrate how you can contribute to the organization. If you are graduating with a bachelor's degree, present an outline of your coursework and laboratory work, including a discussion of any independent study or research. It's also to your advantage to highlight any industrial experience (summer internships or co-op programs).

Here is a sample format for a chronological résumé:

Associate Scientist, Lockheed Environmental Systems and Technologies, 1994-1997 Las Vegas, NV

- Applied US EPA, DOD, DOE, ASTM, and other standards and methods to quantify pesticides and PCBs using gas chromatography.
- Maintained laboratory equipment, reducing the number of service calls from equipment vendors by 15% and decreasing equipment maintenance costs by 6%.
- Verified inventory of lab chemicals and assured storage of volatile compounds, meeting all OSHA guidelines.
- Recorded and field tested 65 freshwater samples per day, with an analysis accuracy of 99.9%.

If you held several jobs within one company, show the time spent in each job as well as your total tenure with the company. As you go further back into your career, reduce the amount of space for each job; for example, list just two accomplishments instead of four.

If you decide to use a functional résumé format, look at the core competencies required for the vacancy. Then, group your relevant accomplishments under each competency area. Look at the position description for keywords that the employer will recognize. For example, the functional résumé for someone applying for a position as a principal scientist might include the following headings:

- Project Management
- Technical Leadership
- Product Design & Development
- Analysis/R&D

Old Information

Interviewers have a tendency to play down résumé information that is more than 10 years old. However, do include any information relevant to the job for which you are applying, as long as the skills (particularly in instrumentation) are not outdated. Some experts advise older job seekers to omit some jobs and focus on the most recent and relevant ones to avoid drawing attention to their age.

If you took time off from your career, be prepared to explain employment gaps during the interview, not on your résumé or in your cover letter.

Short-Term Jobs

If you've held short-term consulting jobs that are relevant to the position, include them. If there were more than one you can group them, as in this example:

Various short-term consulting jobs with Kimberly Clark, Procter & Gamble, 1994–
96
GlaxoSmithKline, Johnson & Johnson.

Also describe briefly, using a bulleted list, any interesting projects or innovative technologies that support your qualifications.

Education

After putting your skills and accomplishments together, formatting your education information is pretty straightforward. For each entry, include degree(s) awarded, major(s), school name and location, and year of graduation. For an advanced degree, include the title of your dissertation and your adviser's name. Unless you are a recent graduate, this information goes toward the end of your résumé.

If you are a recent graduate with a bachelor's degree, include a grade point average (if above 3.0), whether your bachelor's degree is ACS-approved, and any academic honors and notable activities. If you have an advanced degree or are a more experienced chemist, it is not necessary to mention your grade point average.

Here is a sample format:

Post-doctoral fellow, University of Oklahoma, Riddler, OK 2003 - present

- Mentor: Ebenezer Quinn
- Research Focus: Synthesis and evaluation of mechanistic based enzyme inhibitors for 2-C-methylerythritol 4-phosphate synthase and isopentenyl diphosphate isomerase (type II)

Ph.D., Medicinal Chemistry & Pharmacognosy, Random State University, Mobius, CO 2003



- Advisor: Tony Osterwise
- Thesis: 1. Synthesis of (R)-glycine-d-15N. 2. Synthesis of carbon-linked analogs of retinoid glycoside conjugates

**B.S., Chemistry, University of Nevada, Las Vegas, NV
1995**

- Advisor: Arthur Connor
- Senior project: Colorimetric-based field analysis of benzene in water or soil
- 3.6 GPA; Dean's List all semesters

Other Relevant Skills

Toward the end of the background section, include any other skills you have that are relevant to your job objective. For chemistry professionals, those skills might include things like special techniques, instrumentation, unusual computer programs, or foreign language skills. Use keywords that are relevant to the position you are applying for, such as technical keywords and communication keywords.

Some organizations use software to search for keywords of interest, so be sure to include those terms that are mentioned in the job advertisement. For example, if your specialization is “novel applications of asymmetric intramolecular Diels-Alder reactions,” use “synthesis” and “natural products” as well. If your résumé is scanned, it might not be selected for a human to view without the relevant keywords.

Volunteer Work

List volunteer work that exhibits leadership, management skills, or the ability to work on a team — anything related to the job. This is especially important for new graduates, who may have limited experience to offer in the workplace.

Military Service

Include military service if the experience is relevant to the job. If you gained leadership and management experience while in the military, also list these points as acquired skills in the appropriate section.

Supporting Information

Publications and Presentations

List your publications using the accepted citation protocol as outlined in the ACS Style Guide (3rd edition). If you have numerous publications, presentations and patents, they may not fit on the résumé itself. Instead, include a line such as “24 publications in peer-reviewed journals, 3 patents and 8 presentations.” Then prepare an appendix to your résumé that can be sent as a supplement or provided upon request. If you have a journal article that is “in press,” meaning it will be published soon, then include it on your list. If the article has been written but not yet accepted for publication, do not include it.

Oral presentations usually duplicate published material, so list only invited or keynote presentations on your résumé. Oral presentations to your own department should never be listed. However, because presentations also reflect public speaking skills, recent graduates can include them, if space allows.

Professional Awards and Honors

List academic and professional awards from national, regional, and local organizations, including membership in honorary societies. For awards, include the name of award, the date, the granting organization, and describe the accomplishment behind the honor.

For recent graduates, include competitive scholarships and fellowships as well as academic honors such as dean's list and graduation with distinction. If the award is particularly notable, consider also adding it as a bullet in your highlights or summary at the beginning. An awards section for a recent B.S. chemist might look like this:

Awards

- Iota Sigma Pi (National Honor Society for Women in Chemistry)
- Phi Lambda Upsilon (national honorary chemical society)

Professional Affiliations

Also mention positions in professional organizations like ACS, and non-scientific activities showing leadership as relevant to your job search. Include job-related memberships in national, regional, and local professional organizations as well as any offices held. Avoid listing political or religious activities unless they demonstrate leadership ability. In this case, write in general terms to camouflage the exact identity of the political or religious organization. If you're applying for a job that has certain memberships, certifications, or licenses as prerequisites, be sure to include them. For example:

Affiliations

- American Chemical Society (ACS), member 2002–present.
- ACS Student Affiliate Chapter, President 2004.

Citizenship

International chemists will be asked about their visa status during the hiring process. If you were born outside the U.S. but are now a U.S. citizen or a permanent resident, include your status on the résumé, in the heading section. If you have a temporary visa, however, do not state this information. If there are no suitable American candidates for the position, the employer may be willing to sponsor a candidate for permanent resident status. This can be discussed during your interview.

Research Summary

Many pharmaceutical and biotechnology companies now expect a one to two page research summary — a separate document sent with the résumé. This document can include structures,



reactions and mechanisms, if appropriate. Do not violate any confidentiality agreements or share proprietary information.

The summary should be detailed, but not too technical—leave the technical details for your seminar in the interview. It should cover briefly what problem your research was intending to solve, what tools and techniques were used and why, the results of the research, and possible future directions for this work. It should clearly indicate which parts were your contribution.

Miscellaneous Considerations

Here are some items that are better left off your résumé:

Personal information—Your personal information is private: Date of birth, Social Security number, height, weight, health, marital status, religious affiliation, children, sex, national origin or race.

Photographs on résumés are not acceptable in the U.S. This may not be true in other countries, so before applying overseas check on their standard résumé format and expectations.

Hobbies aren't necessary unless they're relevant to the job or reflect your skills or accomplishments.

The Question of References

It's not necessary to state "References available on request" on your résumé, for a number of reasons. First, employers assume you will provide references when asked. Second, it takes up valuable space that you could use for other information. Third, it's a good idea to give your references information about the job you're applying for so they can prepare for the call. Last, some employers may call your references first before interviewing you.

Your list of references can be a component of the résumé "portfolio." When you choose your references, ask people who will be strong advocates for you. Contact them in advance as a courtesy to be sure they're willing to speak on your behalf. Make sure they have a current copy of your résumé and provide updates on your job search. It's best if your reference and potential employer can speak directly to one another so make sure to include their name, phone number and complete contact information.

References need not be restricted to former supervisors — they can be coworkers, consultants, former professors or mentors, or any other person in a position to observe your performance. Select references who can describe your attributes clearly, accurately, and enthusiastically.

Letters of recommendation also may be helpful, especially if you are a recent graduate. Send them as attachments to your résumé or bring them to the interview.

Format: Chronological? Functional?

Now that you have collected all your information, think about how you will market yourself to potential employers. What are you selling? What are the most important parts of your

background? There is no single right way to organize a résumé. Use whatever format that best fits your needs and what you want to convey.

For most job seekers, the reverse chronological format is likely the most beneficial. Employers can evaluate your career history, the length of time in each job, and your educational and other credentials. This format allows you to show your career progress and the achievements in each role. A strong summary statement or career highlights puts your most impressive qualifications right at the top.

You can order your résumé as follows:

- Heading
- Objective/Summary/Highlights
- Professional Experience (in reverse chronological order)
- Education
- Awards
- Volunteer Work and/or Military Service (if applicable)
- Professional Affiliations
- Publications, Patents, and Presentations

Job seekers who have been out of the workforce or who are changing careers or industries will benefit from using the functional résumé format. You can repackage your relevant skills and accomplishments from various work experiences to convey your value.

This format can also be used if you have a number of gaps in your employment history, or have worked for only one employer for your entire career. In either case, you may want to emphasize your skills and accomplishments, if your employment history does not show continual progression and growth.

The disadvantage to the functional résumé is that employers can't always tell when and where you used your skills or if your résumé is hiding any "red flags." However if it's the best format for your situation, then use it.

Your résumé can be ordered as follows:

- Heading
- Objective
- Summary/Profile
- Key Skills & Accomplishments
- Work History (in reverse chronological order)
- Education
- Awards
- Professional Affiliations
- Publications, Patents, and Presentations

Recent Graduates

If you are a recent graduate looking for your first professional job, your education is your strongest selling point so it should be placed more prominently on your résumé. Use a functional format to showcase the experience you do have. For example, you could have a key skill area called “Leadership Experience” and feature leadership activities in student affiliates chapter or local section, for example, and part-time jobs.

In that case, your résumé would probably include sections in the following order:

- Heading
- Objective/Highlights/Summary
- Education
- Skills and Accomplishments
- Work History (in reverse chronological order)
- Awards
- Volunteer Work and/or Military Service (if applicable)
- Professional Affiliations
- Publications, Patents, and Presentations (if applicable)
- References

Before You Continue

Ask a friend, colleague, or family member whose opinion and command of English you trust to read your résumé and provide feedback. Are there any typographical errors? Don't rely on spell-check programs-- “field” and “filed” are both spelled correctly but could be in the wrong place. This is especially important if English is not your first language.

Also, you want to know whether your résumé gives a clear picture of you and the employment you're seeking. Quiz the reader by asking what parts of the résumé he or she remembers. Are those the facts you want the recruiter to remember? Discuss any parts of the résumé that were unclear and rewrite them. Finally, ask whether your text conveys a sense of purpose and appropriate emphasis on your achievements. Is it an attractive package that is accurate, clear, and specific?

Converting to Text Format

New technologies have changed the job application process in many companies. Résumés are now electronically scanned, prescreened, and stored in databases for later reading by recruiting or hiring managers.

When you apply for a job at a company you may be asked to apply through the company's website, which involves cutting and pasting the information from your résumé into an online application. Since your résumé is formatted, the content could be corrupted if the application doesn't read it correctly. Therefore, you'll want to create a text-only (ASCII) version of your résumé. This method simplifies the employer's recruitment, screening, and selection process even more by making scanning unnecessary.



Creating a text-only version simply involves stripping the résumé of all its formatting. It may no longer be visually attractive but it's now easy to copy and paste into a website application. A text-only format makes your document computer-friendly and enables you to post more easily on online job boards and when you apply through a company's website.

Beware of submitting your résumé unsolicited as an e-mail attachment. Because of computer virus concerns, an employer may be reluctant to open an attachment from an unknown sender. Instead, "cut and paste" your résumé into the body of the e-mail or submit it as an attachment in plain text.

Here's how you create a text-only version of your résumé:

1. With your résumé open, use the "Save As" feature and select "Other formats," then "plain text."
2. Rename your file and close it.
3. When you reopen the file, you will see that the formatting is gone and is all in one font, such as Courier New, and the text is left-justified.
4. Review the résumé carefully to ensure readability, rearrange any text, and remove any unusual characters that may have been inserted by the word processor in place of quotation marks, dashes or other symbols.

Try sending the résumé to yourself, or to a friend with different printer settings, to see how it transmits. If necessary, remove extraneous marks and adjust the formatting.

Be cautious in submitting information about yourself online — a résumé posted online becomes public property, and could end up in places you don't expect or want. Your current employer may also stumble upon it while searching for other candidates.

Components of a Resume Portfolio

The résumé portfolio is an electronic and physical folder that should contain several versions of your résumé, as well as some other key documents that will support your job search. It will contain:

- Several versions of the résumé geared to different job objectives
- Cover letter(s)
- List of references
- Research summary
- Other relevant marketing documents (patent review, management philosophy, etc.)

The Purpose of a Cover Letter

You will need to include correspondence with every résumé you send out, whether it's an online application, responding to a job ad by e-mail or following up on a referral from your network. While any of these can be considered a cover letter, each one would be tailored to the purpose.



A good cover letter complements your résumé and entices the hiring manager or reader to look at your résumé. The cover letter:

- Highlights connections between your experience and the position
- Communicates your personality, stature and credibility
- Demonstrates knowledge of the hiring company
- Differentiates you from other applicants
- Asks for an opportunity to discuss your qualifications in more detail

Cover Letter: The Format

The cover letter doesn't have to be very long. Here are a few tips to writing an effective letter.

The Introduction

The first paragraph of the letter tells the reader:

- The job you are applying for
- How you learned about it
- Any contacts you have in the company

This information is important because it helps the reader put your résumé in context. Your opening sentence should grab the reader's attention. It can be as direct as "Emily Miller suggested I contact you to see if my experience as a quality control engineer for Ratliff Pharmaceuticals would be of interest to you at XYZ Laboratories." Or it can reference a specific opportunity such as, "I was interested to read in C&EN about XYZ Laboratories' recent expansion. As an experienced quality control engineer conducting stoichiometric calculations and statistical process control, I can make significant contributions to XYZ's analytical chemistry business."

Employers hire people because they have a problem to be solved or a need to get something done. Your opening paragraph can show the reader that you understand why companies hire chemists.

The Body

This section of the letter shares details the reader will find relevant. If you are responding to an ad, scan it for important details, and then incorporate them into your cover letter. What you want to do in two to four paragraphs is:

- Expand on your qualifications
- Pick the most relevant qualifications and describe in detail

The purpose of the cover letter is to generate interest in your résumé. Do not feel you have to compare your qualifications with every job requirement point by point; your résumé provides the in-depth detail. You can pique the reader's interest by targeting your most relevant qualifications and accomplishments and persuade them to contact you.



In the event that you're contacting an employer at the suggestion of someone in your network, do your best to establish what problems need solving – ideally, with some input from your networking contact—and address those points in your letter. Don't forget to do some research about the company and industry that you can reference in your letter.

If you're writing as a follow up to an informational interview (a meeting to learn more about a particular career path or industry), take the opportunity to expand on a specific topic that was discussed by sharing examples from your previous experience.

The bottom line is that the body of your cover letter should focus on results, examples and other accomplishments that are in your résumé. Instead of just cutting and pasting bullet points from your résumé into your cover letter, say something about them or provide some additional information that isn't in the résumé.

The Conclusion

Your closing should be no longer than one paragraph. In closing your letter, you want to:

- request an interview (or some other response, as appropriate)
- state where and when you can be reached
- express your willingness to come to an interview or supply further information

End the letter on a positive note and keep the focus on the value you can add:

“You will find me to be an extremely motivated, hardworking team player and leader who has a strong commitment to the people and organization for which I work. I have every confidence in my ability to make an enduring contribution to Ratliff Pharmaceuticals and would welcome the opportunity to discuss my qualifications in greater detail. In the interim, thank you for your time, consideration, and forthcoming response.”

Salary Information

It is likely that some ads will ask for your salary requirements. You can approach this one of three ways.

First, don't say anything at this stage because you have no job offer; your goal is to negotiate an offer that is commensurate with your background and experience. You know little about the position other than what's stated in the ad. Why should you disclose information that could work against you?

Second, if you feel more comfortable addressing the information in some way, do some research first to learn the median salaries for the position. The ACS Salary Comparator is one source of information; C&EN publishes stories about the annual salary surveys, including tables, that you can find in the C&EN Online archives. Then, state a range based on your research, for example, “I understand that typical salaries for this type of



position are in the range of \$65,000 to \$80,000 and I anticipate a comparable salary from your company.”

Third, if you are responding to an ad that states you must include your salary requirements or your application will not be accepted, stick with a salary range, or a general figure, such as “the mid- to high-\$80s.”

Remember to keep copies of all your cover letters so you’ll know who you contacted and what you wrote.

Curriculum Vitae

The curriculum vitae (CV), used to apply for academic positions, is more detailed than the traditional résumé and is significantly longer. The goal of a CV is to establish your scholarly identity; therefore it will need to reflect your abilities as a teacher, researcher, and scholar. The CV is also a “living” document that is constantly updated as a faculty member’s career progresses.

Unlike a résumé, you can use the same CV to apply for academic positions in a college or university. A typical CV includes the following information:

- **Personal information** - Name, mailing address telephone numbers, and e-mail address
- **Education** - Colleges and universities attended, degrees and dates awarded, Ph.D. dissertation title (typically with the name of the research supervisor) and the titles of your master’s and undergraduate theses.
- **Research experience** – List your postdoc experience along with any other research experience; include instrument and computer experience.
- **Teaching experience** – This includes undergraduate tutoring or assisting experience, graduate teaching assistant assignments, and any special instructional responsibilities.
- **Other employment and experience** – Any other part- or full-time jobs that may be relevant to your job search.
- **Other professional activities** – Note your membership and activity in any relevant organizations, such as ACS, AAAS, NOBCCHE, AWIS, or SACNAS, for example.
- **Honors and awards** – Fellowships and honors received, including undergraduate academic awards.
- **Publications** - Give complete citations, including authors, title, and journal reference.
- **Presentations** - Presentations are made at national, regional, and local meetings and conferences as well as other venues, such as a university seminar series. Identify authors, presenter, title, and venue, and indicate whether it was a paper or a poster presentation.
- **Proposals submitted** – If you have submitted a research proposal list it here.
- **References** - Names and addresses of three or four individuals who have agreed to write letters of recommendation. Some departments ask for the letters as part of the application. Others will ask for letters after you’ve been placed on the short list. Or, the department may contact your references directly. Find out what each department’s procedure requires.

Research Proposals

Perhaps of greatest importance when you apply for an academic position is a description of your proposed research. Departments want to know what you will need to get results within the first three years so you can write a grant proposal that will fund your future research. If you approach your proposed research budgets as though you were submitting them to a major granting agency such as the National Science Foundation, it shows that you have thought your proposals through, you know what you need, and you are ready to execute your plans.

Your proposal should be reasonable in scope and effort; one or two focus areas should be sufficient and should match the resources of the institution to which you are applying. These areas can be subdivided into possible student research projects. If you're applying at an undergraduate school, for example, your proposal shouldn't be designed for work with graduate students or postdoctoral fellows.

Also identify your expected sources of funding and the journals in which you hope to publish your results. Describe your instrumentation and equipment needs along with an approximate start-up budget. (This will be part of your negotiations should you receive a job offer.) Your research proposal will vary with the type of institution – projects that require resources found at large research universities won't succeed at a primarily undergraduate institution and two-year colleges seldom require research proposals.

Teaching Philosophy

A statement of teaching philosophy is your opportunity to discuss your motivation and preparation for a teaching career. In your student career, what kinds of teachers motivated you? In your teaching experience, discuss the strategies you tried, which ones worked and which didn't. Mention the courses you are prepared to teach (again, teaching assignments will be part of the job negotiations) and what topics you are interested in teaching. Focus on courses across the curriculum, from undergraduate to graduate.

Federal Job Applications

The federal government has created a one-stop resource for federal jobs and employment information. USAJOBS (www.usajobs.gov) is the official website of the U.S. Office of Personnel Management. According to the site, more than 30,000 jobs are listed along with information on how to apply. Job postings are updated daily and are available to job seekers in a variety of formats to ensure accessibility to everyone.

You first need to set up an account on USAJOBS. The online résumé builder allows job seekers to create on-line résumés specifically designed for applying for federal jobs. Applicants can use the résumé builder to create, print, save, edit for future use, or send by fax or mail to employers.



Many of the hiring agencies will accept electronic submissions of résumés created through USAJOBS for vacancies listed on the website.

You can create and save up to five different résumés—here’s where that text-only résumé comes in handy--specifically designed for applying for federal jobs. You can elect to have your résumé searchable by federal agencies looking for job candidates and set up search agents that will e-mail you automatically when new job openings that meet your specific qualifications and interests are posted.

Once you’ve found a job announcement, read through the various tabs: “Duties,” “Qualifications & Evaluations,” and “How to Apply” for that particular position. Questions about the job announcement or hiring agency should be directed to the contact person identified at the bottom of the announcement or that agency’s website.

You can apply for most federal jobs using your USAJOBS online résumé. The “How to Apply” tab of the vacancy announcement will have specific instructions for submitting your application online, or by mail or fax. When applicants do not follow the instructions provided, the application will be considered incomplete and they are not considered for the job so read carefully!

Completing the OF-612 Form

An optional application for Federal Employment, the OF-612, is also available to apply for federal jobs. Procedures vary across agencies, so follow the instructions in the job announcement carefully. To download an OF-612 form go to <http://www.opm.gov/forms/html/of.asp>.

Information required for all federal employment applications:

- **Job vacancy specifics** – Announcement number, title and grade
- **Personal information** – Full name, mailing address, day and evening phone numbers, e-mail address, country of citizenship (most jobs require U.S. citizenship), and veterans’ preference
- **Work experience** - Paid and unpaid experience related to the job, including duties and accomplishments, employer’s name and address, supervisor’s name and phone number (indicate if supervisor may be contacted), starting and ending dates (month and year), hours per week and salary

The work experience format applies for each relevant job starting with your current or most recent position. If you were employed previously by the federal government, you may be eligible for special consideration. Be sure to list that job in your work history, along with your series and grade.

- **High school education** - School name, city, state, zip code, date of diploma or GED
- **Post-secondary education** – Institution name, city and state, majors, type and year of degrees received. If no degree, show total credits earned and whether semester or quarter hours.



Also include other qualifications in the application, such as:

- **Job-related training** - Title of course and year
- **Skills** - Foreign language proficiency, computer software and hardware skills, for example
- **Licenses or certificates** – Current ones only, including type of license or certificate, date of latest license and state or other licensing agency
- **Honors, awards, special accomplishments** – Publications, professional memberships, leadership activities, public speaking, for example (Give dates.)

Make sure your application or federal résumé is complete and covers any points mentioned in the announcement. Sign the form — your signature is required to vouch that all the information is true.

Résumé FAQ
(Frequently Asked Questions)

Q. Should I include professional affiliations?

A. Yes, if they're relevant to the job or if membership is a prerequisite. You may also want to list fraternal or community service organizations that attest to your business skills, integrity and civic-mindedness, but avoid listing political or religious affiliations. If you want to include potentially controversial groups, because of relevant experience you obtained there, use general terms to describe them.

Q. Should I include personal data?

A. Do not give personal information — height, weight, health, marital status, age, race, or religion. Don't include any photographs. List hobbies only if they're relevant and you truly feel it will help you get the interview. Remember that expectations are different in different countries, so check local customs if you are applying overseas.

Q. I've been in the workforce several years and have held many jobs. Must I include all of them on my résumé?

A. For any information over 10 years old, consider mentioning it very briefly as a part of professional experience or employment history, and only if it's related to the job.

Q. Should I list volunteer work?

A. Yes, if it's pertinent to the job and supports your leadership, management skills, or ability to work on a team.

Q. I am not an American citizen. Should I list my visa status?

A. Foreign nationals will be asked about visa status during the hiring process. If you are foreign-born and a citizen or permanent resident, state this on your résumé, preferably in the heading. If you have a temporary visa, do not include this information. If there are no suitable American candidates for a position, the company may be willing to sponsor you for a permanent visa. If there's sufficient interest in your résumé, a prospective employer will ask about your visa status and decide on a course of action.

Q. How do I handle gaps in employment?

A. A few short gaps are not as much of an issue as they used to be, and you should just be prepared to explain them in the interview. If you have many or extended gaps, consider using a skills-based résumé. As you can see from Résumé Examples, this type concentrates on what you can do rather than where you have worked. Your skills should be listed before giving a brief employment history. If you've taken time off from your career, make sure that your skills — (particularly in instrumentation) are up to date.

Q. I am over 40 and have considerable experience. I'm willing to take a salary cut in a new position, but employers still tell me I'm overqualified. How can I use my résumé to solve this problem?

A. Read the job description very carefully and craft all parts of your résumé accordingly. The skills-based résumé is a useful format for disguising extensive education or experience, but be careful not to downplay your talents too much. Mention in your cover letter that you're willing to negotiate salary.

Q. Must I include an objective statement?

A. Although a career objective at the beginning of your résumé is not required, it is useful for capturing the reviewer's attention if you can make it specific. Use this statement to describe what you want to do, choosing words that correspond to the job announcement or ad and customizing the objective for different employers. If you are sending numerous "blind" résumés, and the objective statement would therefore sound generic or canned, leave it out. Even if you choose not to put the objective on your résumé, taking the time to write one can focus your thoughts as you target your job search.