Graduate Resume and Curriculum Vitae Guide

WHAT IS A RESUME?

- Your marketing tool to prospective employers in industry
- A concise one- to three-page document that highlights your most relevant experiences and skills tailored to each position to which you are applying

Tip: Create a master resume of all your experiences and accomplishments. Use this record to write a one- to three-page tailored resume for each position you apply for highlighting your most relevant qualifications.

WHAT IS A CURRICULUM VITAE (CV)?

- An academic version of a resume that provides a professional archive of all your experiences related to your academic career
- For graduate students, a CV is typically a few pages. Length can be determined by the amount and depth of your experiences. A CV should then be tailored to the position you are applying for by ordering your sections from most to least relevant
- Use your CV as a professional archive and keep it updated with all your accomplishments

Tip: Consider consulting with a faculty member or advisor for advice and feedback on your CV because they often serve on hiring committees and have experienced an academic job search.

TO GET STARTED WITH YOUR RESUME OR CV:

1) Make a list of your experiences: Education, research, teaching, publications/presentations, organizations, etc.
2) Think about your contributions, skills you used and developed, and your significant achievements 3) Begin to craft your resume or CV by organizing these experiences into sections (examples below)

There are many sections that could be a part of your document. It is important to keep in mind that your document should be specific to your experience and the position for which you are applying. You have flexibility in the choice, naming, and placement of sections. While your contact information and education are usually listed first, other sections can be in any order, based on your strengths and the requirements of the position or opportunity. If you are unsure if you should provide a resume or a CV, you may want to contact the organization directly to see which they prefer.

RESUME AND CV SECTIONS

Below is a list of common sections you may use when creating your document. To see examples of these sections, refer to the example resume and CV at the end of this guide.

CONTACT INFORMATION:

Include your name, present and/or permanent address, telephone number, and email address.

SUMMARY OF QUALIFICATIONS:

Included on a resume, a set of bullet points (skills statements) that concisely highlight skills and experiences on your resume that relate directly to the position.

EDUCATION:

Include all institutions of higher education you have attended and are currently attending in reverse-chronological order (most recent first). Include: The degree you are seeking, university name, college name, city and state of the university, your (expected) graduation date, and GPA. Thesis and dissertation titles, minors, coursework, academic awards, and study abroad programs may also be included in this section.

THESIS/DISSERTATION:

Provide the title and a short description of your work, its framework, and your findings, as well as your advisor and committee members. Also include the completion date.

EXPERIENCE:

For each experience (paid or volunteer) include your position title, organization name and location, and dates of employment. Then create bulleted skills statements to describe your experience using this formula: Action Verb + Details + Result (when applicable).

To format skills statements, begin with a bullet point, then use an action verb (see pg. 4 for list) that describes the skill used (e.g. "created," "researched," etc.) and summarize your duties, accomplishments, and projects. When possible describe the results of your efforts.

Example of skills statement: Demonstrates teamwork

- Weak Skills Statement: "Manufactured diagnostic reagents"
- Strong Skills Statement: "Collaborated in a team of 15 to efficiently manufacture diagnostic reagents in a GMP environment"

Avoid using personal pronouns such as "I" and make sure verbs are in the correct tense (past tense for past experiences and present tense for current experiences). List your experiences in reverse chronological order (most recent first). Consider creating specific experience sections to highlight different types of experiences, such as "Related Experience," "Research Experience," "Leadership Experience," etc.

TEACHING/RESEARCH EXPERIENCE:

Teaching experiences include information such as courses taught, university and department names, dates, and a description. Research includes title/type of research, faculty contributing, and a description of the purpose and findings. Postdoctoral information can also be included in these types of sections.

SKILLS:

Include tangible skills, such as language, technical, and laboratory skills. Consider your level of proficiency. Avoid including transferable or "soft" skills, such as communication skills.

PUBLICATIONS AND PRESENTATIONS:

Provide a list of published works and presentations authored or co-authored (those submitted and under review), including the title, co-authors or presenters, place of publications or presentations, and dates similar to a bibliography page. When included on a **resume** the list of publications should be selected based on the job description. On a **CV** you will provide a complete list of your works.

PROFESSIONAL ASSOCIATIONS:

List professional associations/organizations in which you hold memberships, including dates of your involvement and a description of your contribution if you have been involved beyond general membership.

AWARDS AND HONORS/FELLOWSHIPS:

List competitive scholarships, fellowships, and assistantships received, names of scholastic honors, and teaching or research awards you have received, specifically those most relevant to the position.

CERTIFICATIONS:

Include certificates related to your field you have earned. List the name of the certificate and its expiration date.

GRANTS RECEIVED:

Provide the name, dates, and amount of grants you have written and received.

REFERENCES:

When requested as part of an application, include the name, job title, organization name, address, phone number, and email address for 3-5 individuals. It can also be helpful to provide a brief statement describing your relationship with each reference. If included along with a **resume**, references are on a separate page that is formatted to match your resume. If included as part of your **CV**, references may be placed at the end of the document.

TRANSFERABLE SKILLS:

As you begin your search for a career and/or job, it is important to know your qualifications and communicate these skills to an employer through your resume, cover letter, and interview. Over the years you have developed many skills through your coursework, extracurricular activities, and life experiences. Review the list below and identify which transferrable skills you have and reflect on how you acquired these skills. Use this information when creating your resume to describe your experiences and the skills gained from these experiences. For example, if you have researched a topic for class and then wrote, edited, and presented a final research paper in front of your peers, you have used skills (gathering information, writing, problem-solving, presenting) which are not limited to that specific academic discipline, but are transferable to many occupations.

Communication	**Research and planning**	**Human relations**	**Organizing, management and leadership**	**Work survival**
The skillful expression and interpretation of knowledge and ideas.	The search for specific knowledge and the ability to conceptualize future needs and solutions.	The use of interpersonal skills for resolving conflict, relating to and helping people.	Ability to supervise and guide individuals and groups in the completion of goals.	The daily skills that assist in promoting effective production and work satisfaction.
Speaking effectively	Predicting	Developing relationships	Initiating new ideas	Implementing decisions
Writing effectively	Creating theories and ideas	Being sensitive	Handling details	Cooperating
Listening attentively	Identifying problems	Listening	Coordinating tasks	Enforcing policies
Expressing ideas	Imagining alternatives	Conveying feelings	Managing groups	Being punctual
Facilitating discussions	Identifying resources	Providing support	Delegating responsibility	Managing time
Negotiating	Gathering information	Motivating	Teaching	Attending to detail
Persuading	Solving problems	Sharing credit	Coaching	Meeting goals
Perceiving non-verbal messages	Setting goals	Counseling	Advising	Enlisting help
Presenting information	Extracting information	Cooperating	Promoting change	Accepting responsibility
Describing feelings	Defining needs	Delegating with respect	Selling ideas or products	Setting and meeting deadlines
Interviewing	Developing evaluations	Representing others	Decision making with others	Organizing
Editing	Creating spreadsheets and databases	Perceiving feelings, situations	Managing conflict	Making decisions
	Calculating results	Asserting		

ACTION VERBS:

Action verbs are an effective way to begin a skills statement. They help to catch the readers attention and demonstrate both technical and transferable skills you have used in your experiences.

Accomplishment
achieved
completed
decreased
expanded
exceeded
improved
increased
oriented
pioneered
reduced (losses)
resolved (issues)
restored
spearheaded
succeeded
surpassed
transformed
won

Communication
addressed
advertised
arranged
articulated
authored
clarified
collaborated
communicated
composed
condensed
conferred
contacted
conveyed
convinced
corresponded
debated
defined
described
developed
directed
discussed
drafted
edited
elicited
enlisted
explained
expressed
formulated
furnished
influenced
interacted
interpreted
interviewed
involved
joined
judged
lectured
listened
marketed
mediated
moderated
negotiated
observed
outlined
participated
persuaded
presented
promoted
proposed
publicized
reconciled
recruited
referred
reinforced
reported
resolved
responded
solicited
specified
spoke
suggested
summarized
synthesized
translated
wrote

Creative
adapted
began
combined
composed
conceptualized
condensed
created
customized
designed
developed
directed
displayed
established
fashioned
formulated
founded
illustrated
initiated
integrated
introduced
invented
modeled
modified
performed
planned
revised
revitalized
shaped
solved

Helping
aided
accommodated
advised
alleviated
assisted
assured
bolstered
coached
continued
cooperated
counseled
dealt
eased
elevated
enabled
endorsed
enhanced
enriched
familiarized
helped
interceded
mobilized
modeled
polished
prescribed
provided
protected
rehabilitated
relieved
rescued
saved
served
sustained
tutored
validated

Planning & Organizing
acquired
activated
adjusted
administered
allocated
altered
anticipated
appointed
arranged
assembled
assessed
assigned
authorized
cataloged
centralized
charted
classified
collected
commissioned
committed
confirmed
contracted
coordinated
customized
delegated
designated
designed
determined
developed
devised
dispatched
established
evaluated
facilitated
forecasted
formulated
housed
identified
implemented
incorporated
instituted
issued
linked
logged
mapped out
observed
obtained
ordered
organized
planned
prepared
prioritized
procured
programmed
recruited
rectified
researched
reserved
retrieved
revised
routed
scheduled
selected
secured
simplified
sought
straightened
strategize
studied
suggested
tailored
tracked

Problem Solving
alleviated
analyzed
brainstormed
collaborated
conceived
conceptualized
created
debugged
decided
deciphered
detected
diagnosed
engineered
foresaw
formulated
found
investigated
recommended
remedied
remodeled
repaired
revamped
revitalized
satisfied
solved
synthesized
theorized

Quantitative
accounted for
appraised
approximated
audited
balanced
budgeted
calculated
checked
compiled
compounded
computed
conserved
converted
counted
dispensed
dispersed
earned
enumerated
estimated
figured
financed
grossed
increased
inventoried
maximized
multiplied
netted
profited
projected
purchased
quantified
rated
reconciled
recorded
reduced
totaled

Technical Skills
adapted
applied
assembled
build
calculated
computed
conserved
constructed
converted
debugged
designed
determined
developed
engineered
fabricated
fortified
installed
maintained
operated
overhauled
printed
programmed
regulated
remodeled
repaired
replaced
restored
solved
specialized
spearheaded
standardized
studied
upgrade
utilized

FORMATTING YOUR RESUME OR CV:

- The length of your resume or CV will depend on your level of experience and qualifications. Generally a graduate resume should be 2-3 full pages and a CV should be 3-5 pages long. However, based on your experiences, career field, and the position description, it could be longer or shorter. Whatever the case, only print your document on one side of the paper and include your name and the page number at the top of each page.
- Avoid using a resume or CV template. This decreases your ability to personalize and make changes as your document evolves.
- Your resume or CV should be well organized, without spelling errors, and easy to read. An employer spends a short amount of time reading your document—it is imperative that the employer clearly sees the most important qualifications.
- To organize your document, you may choose to use bold, italics, all caps, indenting, and bullets. You will want to use these sparingly to emphasize the most important information. Avoid pictures, graphics, non-black ink, shading, and symbols instead of traditional, round, solid bullet points.
- It is a good idea to start with a 1-inch margin on each side. You can expand the margins if need be. Font size should be between 10-12 point, and you will want to choose easy to read font styles, such as Times New Roman, Arial, or Garamond. Keep font size and style consistent throughout your CV (except for your name, which should be a larger size).
- Present your resume or CV on quality bond paper (20 pound)—choose white or off-white to ensure your document is easy to read.
- If you are filling out an online application where you cannot upload your document directly, keep the format simple when filling in required information.
- If you are requested to submit your documents via email, save your resume or CV and cover letter (if applicable) as attach-ments. Include a brief note in the body of the email stating your purpose.

TIPS FOR RESUME AND CV WRITING:

- Make sure that your resume or CV is a unique and personal document. It is a great idea to look at examples of resumes or CVs but also important to make it your own.
- There are some suggestions that we provide when writing a resume or CV, but there are also options and room for choice. If you give your document to several people, they may all give you different feedback. Beyond some of our strongly suggested guidelines, resumes and CVs are subjective.
- Be 100% honest and factual. Avoid abbreviations.
- Organize your document so the most important information is at the top.
- Do not include a work history. Rather, include your most related experiences or those where you demonstrated a high level of skill.
- Personal information, such as marital status, age, ethnicity, height, and weight should not be included.
- Avoid personal pronouns (I, my, we) and complete sentences to describe your experiences. Start your statements with action verbs.
- Always proofread your resume or CV. Do not solely rely on spell check. Some employers may eliminate candidates based on errors.
- It is suggested that you tailor your resume or CV to the job description. You may have more than one version of your document depending on the positions to which you are applying. You may change the order of sections to list more relevant areas of your experience closer to the top.
- Remember that your resume or CV is YOUR marketing tool. Many times it is an employer's first impression of you. It is also a work in progress that you will continually revise.

ADDITIONAL RESOURCES:

- Visit www.ccse.umn.edu to view our Resume Writing or Curriculum Vitae Workshops.
- Visit the CSE Career Center Resource Center to view our Resume Examples Binder and related books.
- Have your resume or CV reviewed by a CSE Career Counselor. You can email to ccse@umn.edu. If you'd like to meet with a CSE Career Counselor to discuss your application materials, you can make a 30-45 minute appointment or stop by during Drop-In Advising and Counseling hours (paper copy only; no laptops).

RESUME EXAMPLE:

GOLDY GOPHER

1234 Gopher Way, Minneapolis, MN 55414
612-555-5555 Goldy001@umn.edu

SUMMARY OF QUALIFICATIONS

- Pursuing a Master of Science in Mechanical Engineering
- Obtained industry experience through internship at Boeing and collaborated on a project with BASF
- Proficient in aerosol/nanoparticle synthesis, sampling, measurements and instrumentation
- Experience in air filtration, cleanroom technology, engine emission, and flow measurement/CFD
- Knowledgeable about thermal-fluid problems, aerosol physics, and mechanical design

EDUCATION

Master of Science in Mechanical Engineering Expected Graduation May 2015
University of Minnesota-Twin Cities, Minneapolis, MN
College of Science and Engineering
Department of Mechanical Engineering
Cumulative GPA: 3.87

Bachelor of Engineering in Mechanical Engineering May 2013
University of Wisconsin-Madison, Madison, WI
College of Engineering
Cumulative GPA: 3.76

RELATED INDUSTRY EXPERIENCE

Intern Summer 2014
Boom Inc., Seattle, WA

- Conducted systematic measurement for flow fields in a smoke test chamber at different heating and ventilation conditions, using Particle Image Velocimetry
- Helped validate CFD simulation results for smoke generation and transport in commercial airplane cabins
- Streamlined a key product characterization procedure, improving reproducibility and turn-around time for manufacturing
- Designed and implemented comparative studies of various standard operating procedures in order to detect areas of improvements
- Collaborated with a multi-disciplinary team of software engineers, electrical engineers, and aerospace engineers
- Interacted with customers, partners, subcontractors and suppliers
- Presented findings and recommendations of project areas that could be developed to the internship coordinator and colleagues

SKILLS

Particle Generation: Nebulizer, Tube Furnace, Fluidized Bed, Diffusion Burner, Electrospray

Laboratory Instruments: Electron Microscopy (TEM, SEM, EDX), Differential Mobility Analyzer, Condensation Particle Counter, Nanoparticle Surface Area Monitor, Nanometer Aerosol Sampler, Aerodynamic Particle Sizer, Optical Particle Counter, Liquid Particle Counters

Programs: LabVIEW, Matlab, ANSYS, Fluent, AutoCAD, Pro/ENGINEER, SolidWorks, ImageJ, Macromedia

Computer Languages: C/C++, Fortran, HTML, JavaScript

PROJECT EXPERIENCE

Developing Pulsed Aerosol Loading System, Center for Filtration Research (CFR) Spring Semester 2014

- Designed and built the control hardware and program of an experimental system for pulsed aerosol loading tests on filter media

Upgrading Control Software of UNPA, BASF Company Fall Semester 2013

- Improved the LabVIEW control software of Universal Nanoparticle Analyzer (UNPA); added new functions, such as particle diffusion loss correction; enhanced program user interface and debugged code errors

RESEARCH EXPERIENCE

Graduate Research Assistant September 2013–present

Particle Technology Lab, College of Science and Engineering, University of Minnesota-Twin Cities, Minneapolis, MN

- Collaborate with area companies through the Center for Filtration Research (CFR) to study mass loading and pressure drop on Nanofiber filters
- Perform experimental and theoretical studies on the filtration of fractal aggregates
- Measure penetration of silver aggregates across model screens at various sintering temperatures
- Develop an analytical model for predicting effects of particle structure on filter efficiency
- Continue NSF funded research on real-time structure and mass measurements for agglomerated nanoparticles
- Evaluate in situ the particulate mass concentration of diesel engine emissions using a variety of instrumentation and methods
- Apply the Universal Nanoparticle Analyzer (UNPA) to investigate effects of sintering on morphology of metallic nanoparticle agglomerates formed by spark discharge
- Develop new modules for and maintained a web-based software on filter performance evaluation, dust cake loading and filter pleating design
- Conduct numerical study on diffusion-limited aggregation of nanoparticles in laminar shear to find the relation between velocity gradient and aggregate fractal dimension

SELECTED PUBLICATIONS & PRESENTATIONS

Journals

- G., Gopher, L. Yang, A.B. Duggard, H. Aleckson (2012). Measurement of Metal Nanoparticle Agglomerates Generated by Spark Discharge using the Universal Nanoparticle Analyzer (UNPA). *Aerosol Sci. & Technol.*, Accepted

Conferences

- Presentation, Effect of Nanofiber Layer on Dust Cake Formation and Structure. XXth *AAAR Annual Conference*, Minneapolis, MN, Oct 26-30, 2013
- Presentation, Online Measurements of Structure and Mass Concentration for Airborne Nanoparticle Agglomerates. *AIChE 2012 Annual Meeting*, Minneapolis, MN, Dec 10-14, 2013

PROFESSIONAL AFFILIATIONS

Member of American Institute of Chemical Engineers 2013–present
Member of American Association for Aerosol Research 2011–present
Member of American Filtration & Separations Society 2011–present

CV EXAMPLE:

Michael Anical

1000 Gopher Avenue #12 651-000-1212
Minneapolis, MN 55414 mechanical@umn.edu

EDUCATION

Ph.D. Candidate, Mechanical Engineering Expected May 2015
College of Science and Engineering, University of Minnesota-Twin Cities Minneapolis, MN
Dissertation title: "Numerical Study of Natural Convection in Solar Thermal Storage Vessels"

Master of Science in Mechanical Engineering May 2013
College of Science and Engineering, University of Minnesota-Twin Cities Minneapolis, MN
Thesis title: "Low Pressure Plasma Synthesis of Crystalline Silicon Nanoparticles"

Bachelor of Mechanical Engineering May 2011
College of Science and Engineering, University of Minnesota-Twin Cities Minneapolis, MN

RESEARCH EXPERIENCE

Graduate Research Assistant, Particle Technology Lab August 2011-present
University of Minnesota-Twin Cities Minneapolis, MN

- Administer experimental and theoretical studies on the filtration of fractal aggregates
- Sustain NSF funded research on real-time structure and mass measurements for agglomerated nanoparticles
- Collaborate with area companies through Center for Filtration Research (CFR) to study mass loading and pressure drop on Nanofiber filters
- Develop new modules for and maintaining a web-based software on filter performance evaluation, dust cake loading, and filter pleating design
- Conduct numerical study on diffusion-limited aggregation of nanoparticles in laminar shear to find the relation between velocity gradient and aggregate fractal dimension

Research Assistant, High Temperature and Plasma Laboratory August 2010-May 2011
Department of Mechanical Engineering, University of Minnesota-Twin Cities Minneapolis, MN

- Designed and optimized a low pressure silane plasma reactor to synthesize single crystal cube shaped silicon nanoparticles for electronic device applications
- Examined and categorized nanoparticles on electron and atomic force microscopes
- Characterized plasma particle system using electrostatic capacitance probe, white light absorption spectroscopy, optical emission spectroscopy, and laser light scattering
- Assembled and maintained vacuum equipment for the experimental setup
- Performed experiments for varying plasma conditions

TEACHING EXPERIENCE

Teaching Assistant, Graduate Level Course-Advanced Aerosol & Particle Engineering January 2011-May 2011
Department of Mechanical Engineering, University of Minnesota-Twin Cities Minneapolis, MN

- Conducted office hours to help students understand and solve homework problems
- Prepared and graded homework solutions
- Wrote weekly quizzes, posted solutions online, graded quizzes and exams, kept record of the scores using Excel
- Collaborated with professors and other TA's on course material and grading policies, improving communication skills

Michael Anical

(Page 2)

PATENTS

- Integrated input roller having a rotary mass actuator — Filed: April 2014
- Handheld device having multiple localized force feedback — Filed: March 2014
- Tag for facilitating interaction with a wireless communication device — Filed: March 2014

AWARDS & FUNDING

- National Science Foundation Graduate Research Fellowship — May 2013
- Mechanical Engineering Advanced Study Grant — August 2012-May 2013
- Recognized as a "Ph.D. Student of Promise" by the American Society of Mechanical Engineers, nominated by Dr. Byron Labb — June 2013
- Minnesota Society of Professional Engineers Graduate Student Scholarship — August 2013-present
- North Star Stem Alliance Scholar, University of Minnesota — August 2007-May 2011

SCHOLARSHIP

Publications

Journal publications

- **Anical, Michael**, John Author, Anne Gineer. Journal article title. International Journal of Mechanical Engineering, 2013; Under review.
- **Anical, Michael**, Goldy Article, Grant Riter. Journal article title. International Journal of Mechanical Engineering, 2012; 126 (56-70): 1020-1056.
- **Anical, Michael**, Rita Journal, Andy Mann. Journal article title. International Journal of Mechanical Engineering, 2011; 122 (43-52): 894-906.

Conference publications

- Author, Mark, **Michael Anical**, Tom Article. Title. Conference title, Conference City, State, 2012.
- Author, Mark, **Michael Anical**, Tom Article. Title. Conference title, Conference City, State, 2011.

Presentations

- Presented "Numerical Study of Natural Convection in Solar Thermal Storage Vessels" at the Minnesota Society of Professional Engineers Conference, St. Paul, MN, September 19-22, 2013.
- Presented "Numerical Study of Natural Convection in Solar Thermal Storage Vessels" at the American Society of Mechanical Engineers Conference, St. Louis, MO, June 4-7, 2013.
- Presented "Real-Time Automotive Slip Angle Estimation with Nonlinear Observer" at American Control Conference, Auburn, AL, January 12-15, 2013.
- Presented "Low Pressure Plasma Synthesis of Crystalline Silicon Nanoparticles" at University of Minnesota Master Thesis Event, Minneapolis, MN, May 2, 2010.
- Presented robot at University of Minnesota Robot Show Fall, Minneapolis, MN, December 8, 2008.

Posters

- "Low Pressure Plasma Synthesis of Crystalline Silicon Nanoparticles," Minnesota Society of Professional Engineers Conference, Minneapolis, MN, September 20-24, 2010.

PROFESSIONAL MEMBERSHIPS

- **International Association of Mechanical Engineers** — August 2010-present
- **American Society of Mechanical Engineers** — August 2009-present
- **Minnesota Society of Professional Engineers** — August 2008-present

Michael Anical

(Page 3)

INDUSTRY EXPERIENCE

Engineering Intern May 2010-August 2010
The XYZ Company Minneapolis, MN

- Researched and developed a solution to manufacturing problems that include ergonomics, structural failures, flow impedances, and quality issues
- Justified the purchasing of new office equipment through the use of statistical analysis and presented findings to the supervisor and other interns
- Improved the manufacturing of modular enclosures through the implementation of lean manufacturing and six sigma capability studies
- Collaborated with four other interns on a variety of projects and improved my teamwork and communication skills

SERVICE

Professional

- Reviewer for the University Executive Council of Graduate and Professional Student Professional Advancement Grants Fall 2012

Community

- Volunteer, Annual Blood Drive-American Red Cross, St. Paul, MN May 2009-present
- AmeriCorps Volunteer, MN Math Corps, St. Paul, MN June 2011-July 2011

REFERENCES

Dr. Gordon Gopher, Professor
Department of Mechanical Engineering
University of Minnesota-Twin Cities
124 Minnesota Lane
Minneapolis, MN 55414
651-555-7799
goldy@umn.edu
Relationship: Professor and mentor for 4 years

Dr. Byron Labb, Professor
Department of Mechanical Engineering
University of Minnesota-Twin Cities
124 Minnesota Lane
Minneapolis, MN 55414
651-555-7799
blabb@umn.edu
Relationship: Ph. D. advisor for 3 years

Dr. Mark Machine, Professor
Department of Mechanical Engineering
University of Minnesota-Twin Cities
124 Minnesota Lane
Minneapolis, MN 55414
651-555-7799
mmachine@umn.edu
Relationship: Teaching assistant advisor and mentor for 3 years