Dear Engineering Student,

Welcome to the Engineering Program at Concordia University Irvine! On behalf of the faculty and staff, it is my sincere pleasure to congratulate you on choosing Engineering as your major and to officially welcome you into our growing community of future innovators, thoughtful problem-solvers, and leaders.

At Concordia, we believe that engineering is more than just a technical discipline; it's a meaningful way to contribute to the world. As you begin your studies, you are stepping into a calling that combines creativity, precision, and purpose. Whether you're drawn to mechanical systems, electronics, or emerging technologies, you'll find opportunities here to explore how your unique gifts can be used to serve others through your work.

Our program is designed to prepare you not only academically but also professionally. One of the most important things you can do as a student is to begin thinking about your future career early on. Career development isn't something to leave until senior year. It's a journey that begins now. This guide has been made in partnership with the Center for Career & Vocation as a practical tool to use throughout your time in the Engineering program. The Career Guide to Engineering will offer guidance and resources to help you discover your strengths, explore career paths, and gain practical experience through internships and networking opportunities.

By starting this process in your first year, you'll be better prepared to make informed decisions and avoid feeling overwhelmed when graduation approaches. With the support of faculty, staff, and career professionals, you'll be equipped to enter the next phase of your journey with confidence and direction.

You are joining a community that cares deeply about your personal and professional growth. We look forward to walking alongside you as you grow both in knowledge and in purpose. As you begin this exciting journey, I encourage you to be curious, ask questions, seek out new experiences, and support your fellow students.

Welcome again to Concordia's Engineering Program. We can't wait to see where your journey leads.

Mariah Lucas
Director of Career & Vocation

Mariah Lucas

Dr. Gabriela Espinosa
Founding Director of Engineering

Gabriela Espinosa

Table of Contents

Table of Contents

Major Overview

E*ngineers with Broad Training for the 21st century*

You may wonder why our major is in Engineering, and not a more specialized degree like Civil, Electrical, or Mechanical Engineering. Rather than focusing on narrow specializations, we believe in equipping you with a broad education that gives you a solid foundation for your future and allows you to continually build on your skills. This gives you the flexibility to adapt to the evolving fields within engineering, even if you end up deciding on a different career path.

Take an Interdisciplinary Approach to Learning and Leading

You will first encounter what we mean by cross-disciplinary thinking in our distinctive general education, called Enduring Questions & Ideas. As you wrestle with these "Great Questions," you'll start to make connections not only within the field of engineering, but also across different subject matters and with your own callings in life. It's this type of curiosity, testing, problem solving, and inventing that is at the heart of engineering, and it's the type of engineer who we believe is best prepared to lead and thrive in a complex world.

Engaging in Service to Others

Engineers have the unique opportunity to positively and significantly impact the quality of human life; whether that's in major urban and suburban areas or the remotest towns and villages of the planet. As a Lutheran university, we take seriously our callings to love and serve our neighbors. Guided by Christian faculty, you will experience an emphasis on moral integrity and service to others throughout not only your classes but in engineering activities that take place outside of the classroom, such as research and design projects.

Career and Graduate School Opportunities

Concordia has a proud legacy of placing our graduates in top-rated graduate schools and first-class Ph.D. programs. Whether your plan is to transition into a master's-level program or join the workforce in an area of national need, you will be prepared to succeed as a leader, professional, responsible citizen, and lifelong learner. A few examples of the types of fields that graduates with a degree in Engineering are qualified for a career or further study include:

- Architectural design
- Electrical engineering
- Biomedical engineering
- Chemical engineering
- Civil engineering
- Computer engineering
- Computing
- Control engineering
- Energy and sustainability
- Mechanical engineering
- Mobile technologies
- Data processing
- Telecommunications
- Transport and utilities companies

Major Overview

Program Learning Outcomes (PLOs)

By the time you graduate, you should have the ability to do the following:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

Program Educational Outcomes (PEOs)

Within a few years of graduation, you should be able to:

- Build a professional foundation based on engineering excellence in a variety of settings, including industry, government, and academia, leading to a stable career with ample growth potential.
- Pursue life-long learning through formal avenues, such as licensure or graduate school, or informally through active professional engagement and development opportunities.
- Apply a holistic approach to engineering, based on strong technical and interpersonal skills and an appreciation of broader ethical, cultural, economic, and societal contexts.
- Seek opportunities to use engineering in service of the needs, roles, and perspectives of others: church, family, schools, colleagues, communities, and society as a whole.

Engineering Major Key Contacts

Julie Melberg
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Alyssa Cloward
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alyssa.cloward@cui.edu

Katherine Olea
Assistant Director of Career Development
katherine.olea@cui.edu

Patricia “Coach Patty” Sanchez
VyC Success Coach
patricia.sanchez@cui.edu

Freshman Year: Foundation & Exploration

Goals:

- Develop foundational skills in mathematics and introductory engineering principles.
- Gain familiarity with essential engineering software and tools, such as CAD, 3D printing, and introductory programming.
- Explore different branches of engineering to help inform your specialization.

Focus Areas:

- Build a strong foundation in math and science, including calculus and chemistry.
- Complete introductory engineering courses to understand fundamental concepts and applications.
- Fulfill general education requirements to build a well-rounded academic foundation.

Extracurricular Activities:

- Join engineering clubs or societies to build connections and gain hands-on experience.
- Attend software workshops or introductory coding sessions to develop technical skills.

Recommended Courses: Please meet with your Academic Advisor to make sure you are taking your correct courses.

- ENGR 101
- ENGR 212
- MTH 271
- MTH 272

Engineering Department

Engineering professors at Concordia University Irvine are dedicated to supporting students in their academic and professional journeys, offering guidance and expertise that extend far beyond the classroom.

With a commitment to nurturing well-rounded engineers, Concordia professors often connect students with research projects, internship opportunities, and industry professionals. They also play a vital role in mentoring students on project design, problem-solving, and technical communication.

Taking advantage of office hours at Concordia is essential for building these relationships and accessing their knowledge. These one-on-one interactions create a space for deeper learning, personalized feedback, and professional growth, empowering students to thrive both academically and in their future engineering careers.

Here is a place you will be able to keep track of your professor's email addresses, phone numbers, and office hours. **Use this page as a reference as you progress through your courses, meet new professors, and look ahead at references for future positions!**

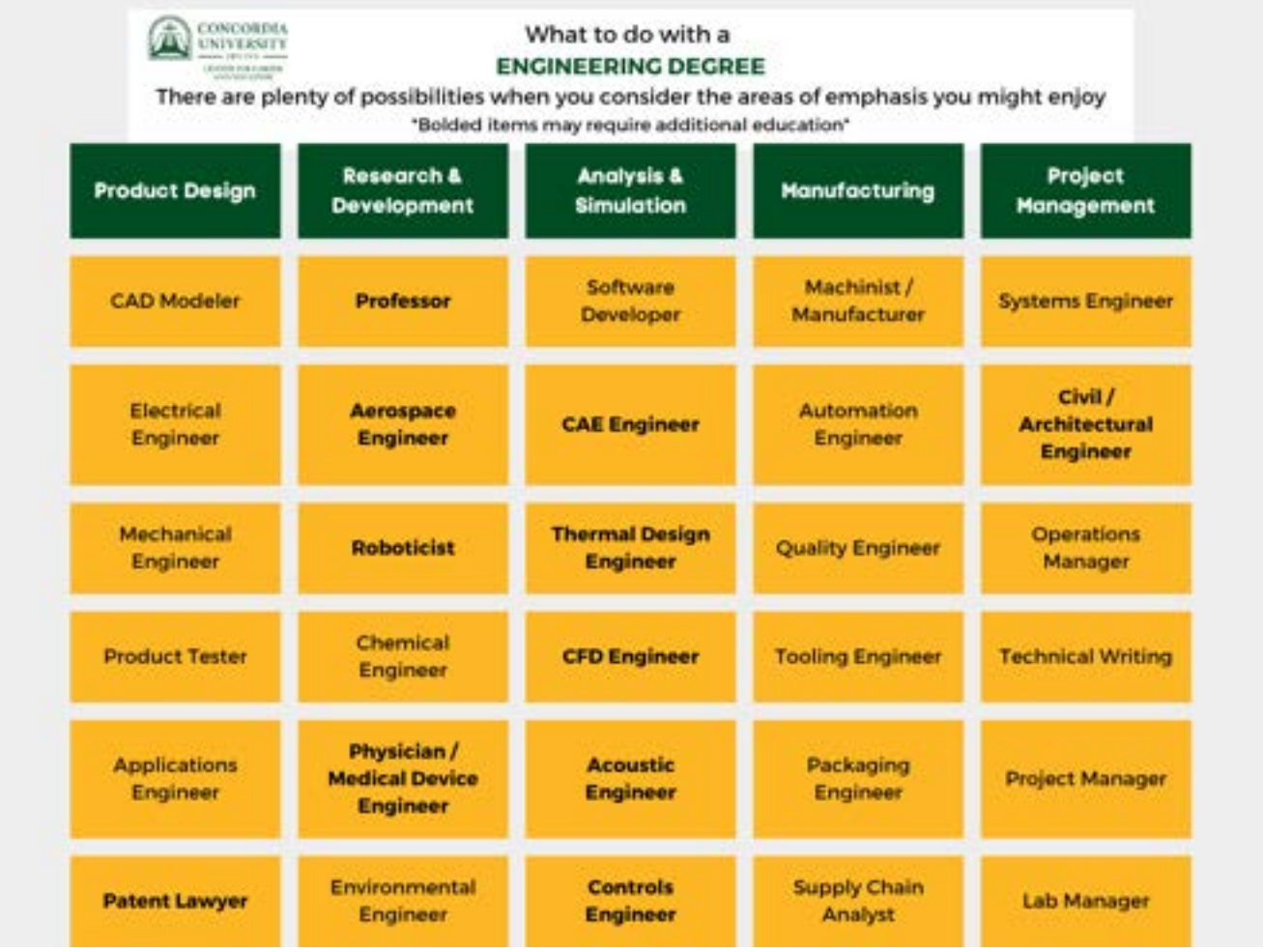
Professor: Email: Phone: Office Hours: Notes:	Professor: Email: Phone: Office Hours: Notes:
Professor: Email: Phone: Office Hours: Notes:	Professor: Email: Phone: Office Hours: Notes:
Professor: Email: Phone: Office Hours: Notes:	Professor: Email: Phone: Office Hours: Notes:

Major Exploration

Hooray! You've picked Engineering as your major! But, what can you do with that exactly?

The Center for Career and Vocation has synthesized a few of the most popular jobs for students with a Bachelor of Science in Engineering. Some may require additional education, and some may allow you to enter the workforce upon graduating from Concordia.

Take a look at the chart below. **Circle potential jobs you might enjoy!**



Major Exploration

Utilize our Career Studio if you want to do additional career exploration! If you're wondering, "what can I do with this major?":

- Navigate to https://www.cui.edu/studentlife/career-services/choosing-a-major
- Scroll down to "What can I do with this major?" (This resource is free through Concordia!)
- Explore this interactive site that shows common career areas, positions, employers, strategies, and research links for Engineering.

Answer the following questions:

Did anything from "What can I do with this major?" surprise you?

What is one key takeaway from this activity?

Career Exploration

Engineering is a vast and diverse field that applies scientific and mathematical principles to solve real-world problems and innovate for the future. In this exercise, you will **explore two different branches of engineering, examining their key focus areas, applications, and the impact they have on society using ONETOnline.org.**

By researching these disciplines, you will gain a deeper understanding of the skills, tools, and roles that engineers in each field utilize. This activity will not only broaden your knowledge of engineering but also help you appreciate the variety of opportunities available within this dynamic profession.

Engineering Discipline #1:_____

What career options are available for this specific engineering discipline?

What do engineers in this discipline do on a day-to-day basis?

What unique skills and knowledge are necessary to be successful in this specific field?

Do you need a professional engineer license to be successful in this discipline?

What are the wage and employment trends for this discipline?

What types of companies do engineers in this field work for?

How does this discipline affect society?

Career Exploration

Engineering Discipline #2:_____

What career options are available for this specific engineering discipline?

What do engineers in this discipline do on a day-to-day basis?

What unique skills and knowledge are necessary to be successful in this specific field?

Do you need a professional engineer license to be successful in this discipline?

What are the wage and employment trends for this discipline?

What types of companies do engineers in this field work for?

How does this discipline affect society?

Which of these disciplines stands out the most to you, and why?

Career Exploration

Questions to Investigate

As you explore this first year at CUI, we encourage you to reflect on and discuss these questions with a trusted friend, family member, or professor.

PRO TIP: You don't need to be in an engineering class to visit with an engineering professor during office hours!

What called you to Engineering?

What Engineering discipline interests you the most?

What career options are available to you?

What steps can you take today to bring you closer to that career?

Center for Career and Vocation

The Center for Career and Vocation supports the mission of Concordia University Irvine by helping undergraduate students discover their calling and vocation, create a roadmap toward career readiness, and maximize employability.

Our goal is to encourage students to persist to graduation and successfully launch into what is next, whether it is graduate school, full-time employment, enlisted in the armed forces, or full-time volunteer work.

<u>The services we offer include:</u>

- 1:1 career coaching
- Resume reviews
- Interview preparation
- Job and internship search strategies
- Workshops and events

We encourage you to stop by the Career Studio in the Schroeder Library and Learning Commons, which also houses Academic Advising, Disability Access Services (DAS), the Writing Studio, Tutoring Center, and the Unity Center. Our staff is readily available to answer any career related questions and offer encouragement along your journey!

Office Hours
Monday - Friday 8:30am - 12:00pm, 1:00pm - 4:00pm
Closed for chapel
Appointments available through Handshake

Located on the top floor of the Schroeder Library and Learning Commons (SLLC)

Center for Career and Vocation

Next Steps:
Set up an appointment with one of our Career Coaches to discuss your professional plans via Handshake. All appointments are in-person in the Career Studio.

1. Log into Handshake
2. Click on “Career Center” on the left hand side menu
3. Click on “Appointments”
4. Click on “Schedule A New Appointment”
5. Fill out and submit your form

What are some questions you can ask your Career Coach?

What skills do you feel you want to work on?

What word comes to mind when you think of your career after Concordia?

Handshake: Overview

What is Handshake?
Handshake is Concordia University Irvine's unique online career services platform. Positions posted on Handshake include on and off campus internships, part-time, and full-time jobs. Job postings hosted on Handshake are tailored toward Concordia's values, and include opportunities across industries.

Why use Handshake?
Handshake offers you access to exclusive internship and employment opportunities that aren't advertised on public platforms like LinkedIn or Indeed. Through the platform, you can connect directly with employers and even engage with students who have previously worked for those companies by utilizing the comment function on postings and information sessions. To ensure you're prepared for a successful search, you can also view and enroll in upcoming workshops designed to strengthen your job-seeking skills. Additionally, Handshake allows you to book an appointment with a Career Coach for personalized guidance. If you're a current undergraduate student, you already have an account—simply log in using your **E# and password** to get started!

Handshake

Handshake: Overview

Frequently Asked Questions

Why do I need to fill out my Handshake profile?

Your profile is the key to finding a job or internship on Handshake. When you fill out your profile: Handshake gives you personalized job recommendations based on the information you provide on your profile—so you can find jobs and internships that are right for you.You increase your chances of having a recruiter message you directly with job opportunities and event invitations.

Can I use Handshake on my phone?

Yes! Download the Handshake App from the App Store or Google Play, to search and apply to jobs right from your phone. You'll also be notified when you receive a message from an employer, be first to see new job postings, and can apply to jobs in two clicks with Quick Apply.

What is the best way to use keyword search and filters?

Keyword search and filters are a great way to narrow down and customize the jobs you see on Handshake. You can filter through jobs by criteria such as job type, location, work authorization, and industry. Keyword search helps you find jobs whose description includes a word that you're looking for. For example, if you search for the keyword "accounting," you will see jobs where the word accounting appears within the posting.

****TIP: Save your searches to quickly access a set of filters you've used in the past.**

Can I use Handshake after I graduate?

Yes! Handshake is a valuable resource that Concordia alumni continue to have access to even after graduation. Whether you're established in your career or just starting out, we encourage alumni to stay connected with the Concordia community through Handshake. Share your experiences from full-time positions and internships to inspire current students, or post potential job openings at your company to help fellow Eagles find their next opportunity.

Handshake also allows alumni to continue developing their professional skills by booking appointments with Career Coaches for personalized guidance on resumes, cover letters, and job search strategies. It's a great way to give back, stay engaged, and ensure you're supported at every stage of your career.

Handshake: Profile Set Up

Sign in with your student E# and password at cui.joinhandshake.com

With a completed public profile you'll show up more in recruiter searches and see more relevant job recommendations.

Students with a complete profile are **5x more likely** to be contacted by an employer.

Steps to complete your Handshake Profile:

1. Start with your interests
    a. Job Type: What kind of job are you looking for? Full-time, part-time, internship, or on-campus?
    b. Location: Where do you want to work? What cities are you interested in?
2. Key Components to Add
    a. Skills: Don't be shy about describing your strengths - add your skills. Include both technical and soft skills.
    b. Documents: Upload your resume.
    c. Courses: Include major courses and electives.
    d. Profile picture: A professional headshot.
    e. Courses: Include relevant courses.
3. Work Experience
    a. Whether it's a part-time barista job or your summer volunteering gig, make sure you add any work experience to your profile. Internships, work study, research positions, volunteering; it all counts!
4. Organizations & Extracurriculars
    a. Include areas and groups you are part of on-campus such as athletics, music, theater, student leadership, clubs and organizations.
5. Graduation Date
    a. Generally, employers recruit seniors for full-time jobs, while other students are recruited for internships and part-time jobs.
6. Don't forget! Make your profile **PUBLIC**!

Handshake: Benefits

With a complete profile, you are able to maximize your Handshake experience! Handshake allows you to:

Discover jobs
Handshake takes the information you share in your profile to show you full-time jobs and internships that align with your interests and that you'd be a good fit for.

Get recruited
All of the top employers, including 100% of the Fortune 500, tech start-ups, nonprofits, and more are hiring students like you on Handshake. When you create a profile, they'll be able to find you and message you about the roles you want.

Apply easily
On Handshake, you can store your resumes and other documents so they're ready when you need them. You can even apply to jobs in two clicks with Quick Apply.

No more wondering
Once you apply, Handshake will send you updates on your application status. And if you have questions, you can explore the Q&A platform and ask peers for advice about interviews, job roles, and more.

What are the top things employers search for?
After job interests, these are the most popular fields that employers use to find students they'd like to message:

- **Work experience:** Have you had a part-time job, internship, work study, research position or volunteered? Employers like to see that you've taken on responsibility, and that these experiences have helped you develop valuable skills.
- **Skills:** Add technical skills like SQL and soft skills like communication. The more skills you list, the better your chances are of showing up in an employer search.
- **Clubs and organizations:** These highlight your unique interests and involvement on campus.

Academic Advising

The Academic Advising Team supports traditional undergraduate students at Concordia University Irvine by providing personalized academic planning and guidance throughout their journey toward earning a Bachelor's degree. Each student is paired with a dedicated advisor who develops a customized graduation plan and assists with navigating the various aspects of academic planning, including course registration, selecting a major or minor, understanding graduation timelines, using My Degree Works, interpreting articulation agreements, and more.

Office Hours
Monday - Friday 8:30am - 12:00pm, 1:00pm - 4:00pm, closed for chapel
Appointments available through your advisor's calendar booking link

Academic Advisors are here to help you create an academic path that aligns with your goals and leads you toward your desired career. To provide the best support, they need to learn more about you first!

During your registration meeting, be sure to share the following information:

Career Goals
Your advisor can guide you toward the right majors, minors, and courses that align with your professional aspirations.

Graduate School Plans
Thinking about grad school? If your future career requires it, your advisor will ensure you're enrolled in the necessary prerequisite courses.

Extracurricular Involvement
Whether you're a student-athlete, club member, or involved in choir or orchestra, let your advisor know; these activities can impact your schedule and academic planning.

Scholarship/Financial Aid Requirements
Some scholarships and financial aid packages come with specific course or enrollment requirements. Sharing this info helps your advisor keep you on track for eligibility.

My Degree Works
You'll have access to My Degree Works starting your first day at Concordia. Be sure to check it regularly for updates on your classes and degree progress.

General Education & Engineering

Engineers are problem-solvers, innovators, and leaders who must navigate complex challenges that extend beyond technical expertise. While engineering courses provide the necessary technical skills, general education plays a vital role in shaping well-rounded professionals. Courses in communication, ethics, the humanities, and social sciences help engineers think critically, collaborate effectively, and make informed decisions that impact society.

This assignment will encourage you to reflect on the value of your general education courses and explore how the skills you gain from them complement your engineering studies. By bridging technical knowledge with broader perspectives, you will be better prepared to tackle real-world challenges and succeed as a versatile and responsible engineer.

<u>Reflect and Connect</u>

Choose two general education courses you have taken or are currently taking. For each course, write:

- The key skills or knowledge you gained.
- How these skills apply to solving real-world problems or challenges engineers may face.

Example:

- Public Speaking: Strengthened my verbal communication and presentation skills, which are critical for delivering project proposals, pitching ideas to stakeholders, and collaborating with teams.
- Intro to Psychology: Helped me better understand human behavior, which is valuable when designing user-centered products, managing team dynamics, and addressing the needs of diverse communities.

General Education Course #1:_____

General Education Course #2:_____

General Education & Engineering

Case Study Connection

Read the following scenario:

You are a civil engineer tasked with designing a new bridge in a growing city. Your design must balance cost, environmental impact, and the needs of the community while communicating effectively with stakeholders.

Write a short response explaining how general education skills like communication, ethics, environmental studies, and economics would help you successfully complete this project.

Group Discussion

In small groups, share your reflections and responses. Discuss:

- Why do engineering professionals need to be well-rounded thinkers?
- How do general education skills enhance an engineer's ability to innovate, collaborate, and problem-solve?
- What could happen if an engineer lacked strong skills in areas like communication or ethics?

Takeaway

Summarize in a few sentences why general education is essential to becoming a successful and responsible engineer. Reflect on how it prepares you to engage with society, address complex challenges, and lead as a professional.

Tutoring Services

Welcome! Tutoring Services at Concordia University Irvine is dedicated to supporting undergraduate students as independent, active learners. We offer one-on-one and small group, in-person, course specific study sessions for a wide range of classes. All of our tutors have succeeded in the classes that they tutor, are recommended by faculty, and are professionally trained in learning theory and strategies.

In addition to our course specific sessions, we offer campus-wide workshops on a variety of topics, as well as resources for students that cover a range of subjects regarding study tips and strategies.

If you have questions or comments about Tutoring Services, please don't hesitate to contact **Jacob Lange, Tutoring Coordinator, at jacob.lange@cui.edu**.

To make an appointment, see what courses have tutors, and see upcoming events, visit https://www.cui.edu/studentlife/tutoring-services.

Key Strengths, Abilities & Interests

In your INT 100 class, you will be directed to complete the Focus 2 Assessment (www.cui.edu/careerassessment) which includes the Work Interest Assessment, Values Assessment, Personality Assessment, and Skills Assessment.

These assessments are designed to be taken with a grain of salt. These are meant to serve as a starting point if you are unsure of how to best utilize your talents.

Work Interest Assessment

What is your Holland Code? _____ _____ _____

What does your Holland Code Stand for? What are the key takeaways?

Select 3 career options from the list that interest you.

1.

2.

3.

Key Strengths, Abilities & Interests

Values Assessment

What three values did you select?

1.

2.

3.

Select 3 career options from the list that interest you.

1.

2.

3.

Personality Assessment

After reading through the bullet points, write the main areas that you agree with below.

1.

2.

3.

Skills Assessment

What skills did you select?

1.

2.

3.

Key Strengths, Abilities & Interests

Reflection Questions:

Are these the results you were expecting?

Did the career you had in mind come up in these results?

How do your God-given talents apply to potential career opportunities?

Extracurricular Activities

Extracurricular activities play a crucial role in shaping your growth as an engineering student, offering opportunities to develop skills that go beyond the classroom. Employers via Handshake highly value students who are actively involved in campus clubs, organizations, and community initiatives. These activities not only allow you to apply and expand your technical knowledge, but they also help you build leadership, teamwork, and communication skills - traits that are essential in any professional engineering role! By engaging in extracurriculars, you not only enrich your college experience but also enhance your resume and increase your appeal to future employers.

Concordia offers many clubs on campus, but a few that may be of interest to you include:

Robotics Club

Our mission is to help people from all majors to enjoy the beauty and order of robotics. We want to teach and improve people's skills and interest in engineering, math, and computer science regardless of their major. We want to create a low pressure, low intensity environment where members can explore their interests in the STEM field. Math and science can be fun and we want to show people that.

Faculty Advisor: Prof. Blake Lane (blake.lane@cui.edu)

Baja SAE Team

Driven by our aspiration to apply classroom lessons to the real world and a commitment to excellence, our Baja SAE team is dedicated to designing and manufacturing a fully functional Concordia off roading vehicle. We embrace the engineering processes, economic challenges, and organizational feats that go alongside the industry standards and requirements to compete at the highest level possible. We hold ourselves to these strict professional standards while living as wise, honorable, and cultivated students. Our mission is to build not just vehicles, but a legacy of professionalism, teamwork, and grit, preparing us for the opportunities and demands of tomorrow.

Faculty Advisor: Prof. Gabriela Espinosa (gabirela.espinosa@cui.edu)

Extracurricular Activities

EPiCS

The EPiCS club is dedicated to igniting the enthusiasm of undergraduate STEM students for Mathematics, Computer Science, and Engineering, both on campus and within the broader community. Our primary goal is to provide a supportive community for students who share a keen interest in these subjects. We aim to cultivate an environment where you can collaborate on community service projects, nurture your undergraduate career development, and engage in projects that prepare you for the ongoing pursuit of STEM excellence.

Faculty Advisor: Prof. Julie Melberg (julie.melberg@cui.edu)

Valerosos y Curiosos (VyC)

The Valerosos y Curiosos STEM Scholars Club is a dynamic, cohort-based program designed to build a strong community of undergraduate students passionate about STEM. Through innovative opportunities such as a summer bridge experience, academic success coaching, tutoring, mentoring, supplemental instruction, and undergraduate research positions, the club equips members with the tools they need to excel in STEM fields. Additionally, the program fosters a culture of inclusion and belonging by offering professional development for faculty and staff, ensuring a supportive environment for all students. The club also aims to increase the number of students transferring into Concordia's STEM majors from other colleges, creating a thriving and diverse STEM community on campus.

Faculty Advisor: Patty Sanchez (patricia.sanchez@cui.edu)

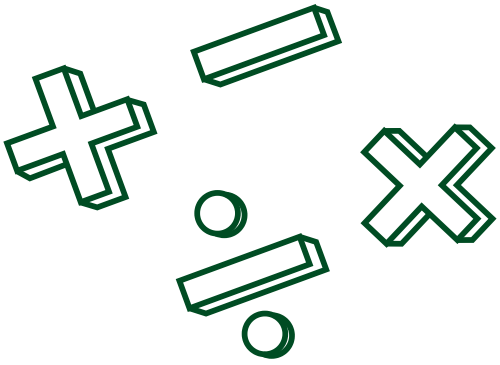
Reflection

How can joining a club or organization on campus help you develop the skills, connections, and experiences needed to positively impact your community as a future engineer?

What are some ways you can get involved on campus or in your community?

Fundamental Concepts

1. Developed a strong foundation in mathematics.
2. Figured out what your study habits are.
3. Taken at least 1 engineering class.
4. Articulated a project from start to finish.



Guided Reflection Questions

Major Exploration:
As you begin your journey as an engineering student, how did your initial expectations about the field align with what you've learned so far? What aspects of engineering are you most excited to explore, and what are you still unsure about?

Career Disciplines:
Engineering offers a wide range of disciplines. After learning about the different types of engineering, which area(s) do you find most interesting, and what skills or experiences do you think are necessary to succeed in those fields?

Handshake Platform:
The Handshake platform provides valuable resources for career development. How do you plan to utilize Handshake to explore job opportunities, internships, or connect with professionals in the field? What features of the platform do you think will be most beneficial for your career exploration?

General Education and Its Importance:
How do you think general education courses will complement your engineering studies? Reflecting on the importance of well-rounded learning, how can skills gained from non-technical courses help you in your future career as an engineer?

Strengths Reflection & Extracurricular Activities:
Reflecting on your personal strengths and interests, what extracurricular activities or clubs on campus do you think would help you develop these skills further? How do you see involvement in these activities benefiting both your academic growth and career development in engineering?

Sophomore Year: Skill Building & Specialization

Goals:

- Start exploring specific fields within engineering, such as mechanical, electrical, or civil engineering.
- Build technical skills in areas like physics, circuit design, mechanics, or programming to begin developing a portfolio of projects or coursework to showcase your skills.
- Create an Illumination Mentorship account to connect with Concordia alumni.

Focus Areas:

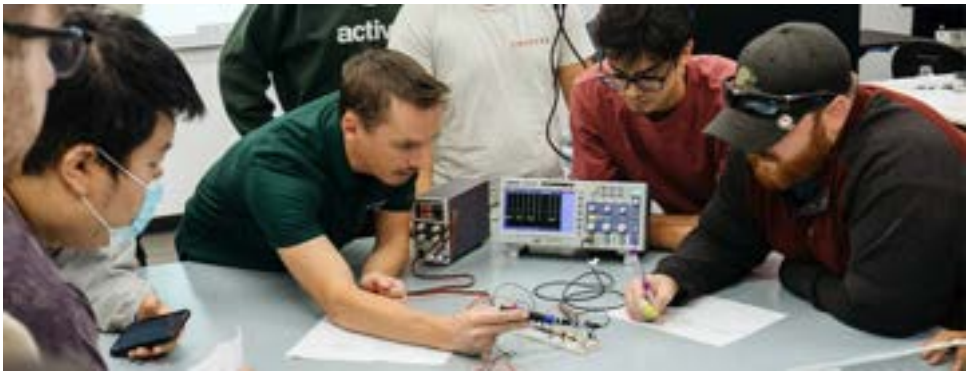
- Strengthen skills in core engineering disciplines (mechanics, thermodynamics, circuits, materials science).
- Gain experience with tools for modeling, simulation, and analysis, such as MATLAB.
- Explore specialization courses that align with your interests and potential career paths.

Extracurricular Activities:

- Work on class projects, personal projects, or competitions (e.g., robotics, solar cars).
- Look for part-time work, internships, or research opportunities to apply engineering skills in a professional or academic setting.

Recommended Courses: Please meet with your Academic Advisor to make sure you are taking your correct courses.

- ENGR 210
- ENGR 312
- MTH 373
- PHY 221
- PHY 222
- ENGR 314*** (placeholder for Engineering “select 3 of these courses”)



Field Exploration

Engineering is a diverse and rewarding profession with opportunities to make a meaningful impact on the world. What sorts of incredible opportunities await you in the engineering field?

Research two career paths that spark your interest by using public job posting sites like Handshake, LinkedIn, and Indeed. Discover real-world examples of what each career entails. Look for job descriptions, required skills, and potential employers to gain a deeper understanding of these paths

Career Path #1: _____

Employer Name & Location:

Starting Salary (if listed):

Qualifications:

Educational/Skill Requirements:

Job Description:

Field Exploration

Career Path #2: _____

Employer Name & Location:

Starting Salary (if listed):

Qualifications:

Educational/Skill Requirements:

Job Description:

Reflection Questions

What about these jobs was interesting to you?

Did anything from the requirements surprise or confuse you?

BONUS: Take one of these jobs to an engineering professor and ask them what their thoughts on the job are.

Illuminating Mentorship Registration

The Illuminating Mentorship Program is intended to foster relationships between alumni and students through one-on-one guidance, advice, and communication. Student "Mentees" are paired with Alumni "Illuminators" based on major and/or anticipated industry with an alumnus in a similar career. This program is meant to add value to a student's education and experience at Concordia.

The year-long Illuminating Mentorship Program offers monthly topics and tips to guide both the mentee and Illuminator through a successful partnership that is mutually beneficial. The program typically begins mid-Fall and goes through the Spring. All interactions are recommended to be digital and the mentees are encouraged to take initiative to set up at least 3-5 phone calls, video chats, or emails.

The Illuminating Mentorship Program is managed through Concordia Connect at http://www.cuiconnect.com/: the gateway to the Golden Eagle Network. Concordia Connect is a hub for students, alumni, faculty, staff, and parents to offer and seek help with mentorship, internship, industry advice, resume review, and more. Access to Concordia Connect's Business Directory and Resources gives users exclusive offers and networking opportunities, too!

Download the Concordia Connect app for faster access on the Google Play Story (search "Concordia Connect") or Apple Store (search "Graduway Community" and then select Concordia University Irvine).

Contact Information:
The Office of Alumni Relations
(949) 214-3178
alumni@cui.edu

Illuminating Mentorship Registration

Mentorship Topics

The Mentorship program is designed to be flexible in order to best meet your specific needs. Below is a snapshot of possible topics and conversation starters that you can discuss with your mentor.

College Experience

Mentee: Talk about your experience at Concordia. Share a memorable quote from your professor or a current topic in class you find interesting/challenging.

Illuminator: Share about your time at Concordia. What advice do you have for someone to have the best experience? Do you have any favorite classes ?

Choosing the Right Career

Mentee: What are some of your career goals? What are your Strengths and Weaknesses?

Illuminator: How did your academic program impact your professional journey? Looking back on your career, what advice would you give to someone at the start of their Career? What professional organizations are you involved with and in what ways? What used to be some of your biggest weaknesses? What are you most proud of?

Industry Questions

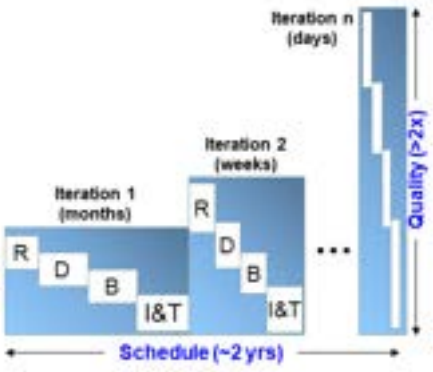
Mentee: What questions do you have for your specific industry?

Illuminator: Talk about the in's and out's of your job. What aspects of your job do you love, what aspects are challenging for you. How do you know this is the right industry for you to be in?

Project Design

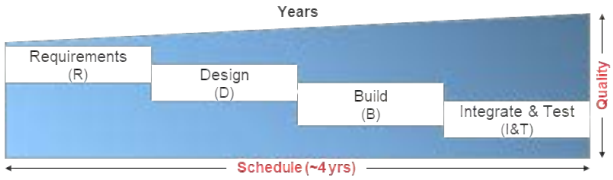
New Way: Iterative Spiral Development

- Emphasizes continuous improvement through iterative cycles: "Build a little, test a little."
- Encourages early detection of design and implementation problems.
- Leads to greater quality in the final product by refining the design throughout the development.
- Enables shorter development timelines as issues are addressed earlier.
- Quality increases with each iteration, starting with months, then weeks, then days.
- Reflects real-world engineering where learning and refining are constant.



Old Way: Traditional Waterfall Approach

- Follows a linear process: Requirements → Design → Build → Integrate & Test.
- Problems are often discovered late in the process, after much time and resources have been spent.
- Quality improvements are limited by the lack of flexibility to revisit earlier stages.
- Tends to result in longer development timelines and delayed delivery.
- Does not support real-time feedback or agile design updates.



Examples of Project Restraints:

1. The structure shall withstand two times the weight of an average American adult.
2. The data shall be acquired at a rate of 1000 samples per second.
3. The prototype shall not exceed $15 in manufacturing costs per unit.
4. The minimum viable product shall be tested by the end of the fiscal year.

Library & Research Services

University-level reading and research starts here.

Whether in-person, online, via chat, or phone, the Schroeder Library Staff is here to help you achieve your learning goals. We provide access to a variety of print books, professional research databases, eBooks/audiobooks, and even add-free classical music to set the mood for studying. Our resources are updated frequently. Stay informed. Follow the Schoeder Library Group on the MyCUI app. Be ready for research by bookmarking cui.edu/library.

For questions, help with research, or to reserve a study room, contact: **librarian@cui.edu**.

Operating Hours
Mon - Thu: 8:00am - 10:00pm
Fri: 8:00am - 4:30pm
Sat: Closed
Sun: noon - 8:30pm

Naxos Music Library

Boundless eLibrary

Research Guides

Research Databases and eBooks

Resumes

The following 4 pages offer guidance that will help you engineer a resume that stands out among the competition!

A resume is a professional document that summarizes your education, skills, experiences, and accomplishments, serving as a snapshot of your qualifications for potential employers. For engineering students, a strong resume is essential for securing internships, research opportunities, or part-time jobs that will build valuable industry experience. Crafting a well-organized and tailored resume demonstrates your professionalism, attention to detail, and readiness to contribute to the engineering field.

PRO TIP: Your resume should be uniquely tailored to the position you are applying for.

Next, we have a list of key components for your resume. When tailoring your resume for job opportunities, be sure to use this checklist as your guide! In addition to building your resume using the following resources, be sure to visit the Center for Career and Vocation for a resume review - and maybe visit the Writing Studio, too!

Resumes

Key Components

Employers want to quickly see why they should hire you. Make sure to include the following:

- Keywords and skills related to the specific job
- Relevant job titles and companies
- Evidence of your impact and accomplishments
- Your degree and graduation date

Keep a **running document** to capture all of your experiences so that you can pull from it and add to it at any time! We recommend using **Google Docs**, or another cloud-based platform.

<u>Heading</u>

Full Name that stands out
Contact Information (Phone number and Email address)
Optional: online portfolio link, and LinkedIn profile URL (if they are up-to-date)

<u>Education</u>

Degree, major, and anticipated graduation date - Month Year
Institution, city, and state (Concordia University Irvine | Irvine, CA)
List course work or projects if indicating it will substitute for lack of experience
DO NOT include high school information
Optional: G.P.A. (if it is a 3.8 or above)
Foreign study (if applicable)

<u>Experience</u>

Position title, Month Year to Month Year
Name of Employer, City, State
Include internships, practicum, and volunteer experiences relevant to target position
Describe relevant experience and accomplishments with bullet points related to the position you are applying for

<u>Class Projects</u>

Project Title
Course name and timeframe (i.e. semester and year)
Tools/Technologies Used
Summary of what you did, your role and team size, and quantifiable results (if possible)

<u>Skills (Optional)</u>

Language Skills: specify languages and level of fluency
Computer Skills: specific software and level of proficiency
Additional skills that are relevant to the target position

Resumes

What is a Resume Bullet Point?
They are statements that highlight the skills and accomplishments you have attained through your experiences. Bullet points are not for listing tasks and duties, but for highlighting accomplishments and skills. Carefully read the job description and desired skills and craft the bullet points that speak to how you fit.

Avoid descriptions with "responsible for," "assisted," and "duties included."
Add **true quantifiable outcomes** to your bullet points when possible.

Bullet Point Formula: Action Word + Task + Purpose/Outcome

Action Word: Select action words that highlight skills listed in the job description
Task: Give details about the work you did, including any relevant technology or process
Purpose/Outcome: Use quantifiable information as much as possible to demonstrate scope and impact of your contribution

Sample Bullet Points:

- Designed a 3D model of a mechanical gear system using SolidWorks to improve load distribution, resulting in a 15% increase in efficiency for a class project prototype.
- Collaborated with a team of four to develop a solar-powered water filtration system, dividing tasks based on individual strengths, which led to the successful presentation of a fully functional prototype at a university engineering showcase.
- Researched and analyzed renewable energy solutions used in diverse regions worldwide to propose an adaptable solar panel design for off-grid communities, addressing global sustainability challenges as part of a group engineering project.

Draft 3 bullet points from your class projects so far. Utilize the bullet point formula listed above.

1.

2.

3.

Resumes

The Career Studio has handouts readily available to help curate your resume to specific job postings, including the below “Action Words” handout. Be sure to note the common mistakes!

Highlight or circle one word from each section that you can use in your resume.

ACTION WORDS

HELPING SKILLS
Administered
Advised
Analyzed
Assessed
Clarified
Collaborated
Conducted
Coordinated
Demonstrated
Developed
Diagnosed
Directed
Evaluated
Facilitated
Implemented
Intervened
Led
Listened
Mediated
Monitored
Negotiated
Performed
Provided
Referred
Spoke
Started
Treated

MANAGERIAL SKILLS
Analyzed
Assigned
Assessed
Contracted
Controlled
Coordinated
Delegated
Determined
Directed
Established
Evaluated
Executed
Expedited
Hired
Organized
Planned
Prioritized
Produced
Proposed
Recommended
Recruited
Reported
Reviewed
Scheduled
Supervised
Tracked
Trained

CREATIVE SKILLS
Acted
Built
Conceptualized
Created
Customized
Designed
Developed
Devised
Directed
Engineered
Fashioned
Formulated
Fostered
Generated
Illustrated
Implemented
Innovated
Inspired
Integrated
Made
Performed
Planned
Produced
Published
Restructured
Shaped
Wrote

COACHING SKILLS
Adapted
Advocated
Authored
Briefed
Clarified
Coached
Communicated
Coordinated
Cultivated
Developed
Directed
Empowered
Enabled
Encouraged
Evaluated
Fostered
Improved
Informed
Initiated
Instructed
Interacted
Lectured
Prepared
Supervised
Taught
Trained
Tutored

DETAILED SKILLS
Approved
Arranged
Catalogued
Charted
Checked
Clarified
Classified
Collected
Compiled
Customized
Dispatched
Examined
Executed
Implemented
Inspected
Monitored
Processed
Recorded
Refined
Researched
Responded
Retained
Reviewed
Scheduled
Standardized
Streamlined
Validated

TECHNICAL SKILLS
Adapted
Assembled
Built
Cleaned
Coded
Computed
Configured
Constructed
Controlled
Converted
Cut
Designed
Engineered
Fabricated
Handled
Installed
Maintained
Measured
Moved
Operated
Programmed
Pulled
Set-up
Shipped
Sorted
Supported
Tested
Utilized

RESEARCH SKILLS
Analyzed
Assessed
Audited
Clarified
Collected
Critiqued
Decided
Diagnosed
Discovered
Evaluated
Examined
Extracted
Extrapolated
Forecasted
Gathered
Gleaned
Identified
Inspected
Synthesized
Interpreted
Investigated
Isolated
Measured
Organized
Perceived
Recognized
Reviewed
Surveyed

FINANCIAL SKILLS
Administered
Allocated
Analyzed
Appraised
Audited
Bought
Budgeted
Calculated
Capitalized
Closed
Computed
Consolidated
Developed
Documented
Expedited
Gained
Initiated
Maintained
Managed
Maximized
Opened
Planned
Prepared
Recommended
Reduced
Researched
Sold
Solved

COMMUNICATION SKILLS
Advised
Advocated
Arbitrated
Arranged
Briefed
Composed
Created
Developed
Directed
Edited
Educated
Enlisted
Influenced
Informed
Interpreted
Led
Mediated
Merged
Motivated
Negotiated
Obtained
Persuaded
Reasoned
Reconciled
Recruited
Sold
Spoke
Wrote

COMMON MISTAKES

- Using vague phrases like: “responsible for,” “helped,” “worked,” or “duties included”
- Listing tasks instead of showing specific results or achievements

Take a look at these common mistakes on resumes!

Personal Branding Statement

A personal branding statement is a concise, compelling statement that reflects the unique values that you have to offer. This statement can help you thrive in your career and life by making it easier to communicate how you stand out from other people in your field.

You can use your statement:

- To enhance your resume
- On your LinkedIn profile
- In your cover letter
- Interviewing for a job
- Discussing majors with your parents/guardians
- Expressing your motivations to others

Customizable template:

I am a student at Concordia University Irvine majoring in **[Your Major]** with a strong interest in **[Key Area or Industry]**, committed to **[Your Key Contribution or Goal]**. Leveraging my skills in **[Relevant Skill or Experience]**, I excel at **[Specific Task or Activity]**, aiming to **[Desired Impact or Result]**.

Personal Branding Statement:

Cover Letter

A cover letter is your opportunity to tell the employer what you are applying for and why you are a good match for the position and the organization.

You should submit a tailored, well-written cover letter with every resume.

Structure & Details

- Address the salutation to a specific person
- Avoid saying "To whom it may concern". If no name is provided then you can use "Dear Hiring Manager" or "Dear Selection Committee"
- Use consistent branding with your resume
- If you are submitting your resume to an email address, your cover letter may be in the body of the email

First Paragraph

- State why you are writing and what position you are applying for
- Share how you learned about the position and your interest in the position
- Make a preliminary assertion as to your strength as a candidate

Middle Paragraph

- Present specific examples of how your background, experience, achievements, and/or qualifications meet the needs of the position description, department and/or organization
- Discuss your knowledge of and interest in some of the specific characteristics of the job
- Mention why you decided to pursue that field

Final Paragraph

- Offer to provide additional material or information
- Indicate how you can best be reached, what is enclosed, your availability for an interview, and the follow up action on your part
- Thank the reader for his or her consideration

Professional Portfolio

What is an engineering portfolio?

An engineering portfolio is a document or website that highlights your skills, abilities, and experience. This contains a collection of your academic and personal projects. A small investment of time and effort documenting your projects will pay off when you are applying to jobs and internships!

What are the benefits of an engineering portfolio?

Portfolios showcase your projects and accomplishments that aren't often reflected in your resume. It gives you the opportunity to showcase concrete examples of your ability to design and create to potential employers.

A portfolio will also set you apart from the other applicants. Including a portfolio with your job application is generally not required but will distinguish you in the minds of potential employers.

How do I create a portfolio?

Document as you go so project details are fresh on your mind. When you are working on a project take staged photos with great lighting and write down pertinent information. Include the project's objectives, the process you used to meet those objectives, any obstacles you overcame, and how your project was successful.

Example of a nicely staged project.

Example of a poorly staged project.

Professional Portfolio

The layout of your portfolio should be simple and can include the following:

- Title page & Index (optional)
  - Always include a title page with your name, major, and contact information. Including a photo of yourself is optional. After the title page, you may choose to add an index.
  - If you choose to include an index, make sure to update it any time you adjust the content or order of your portfolio. You can use the order of your projects to highlight skills and knowledge. If one of your projects relates to a particular job, place it at the beginning of the project section.
- Personal introduction (optional) & Resume
  - You may also choose to have a personal introduction. If so, include anything you want a future employer to know and any information that may give you an advantage. For example, you may have hobbies or experience in professional organizations you want to highlight.
  - Though you've probably already submitted a resume with your application, place your resume in your portfolio for the reviewer's reference. Make sure the resume in your portfolio is up-to-date and matches the resume you submitted with your application.
- Projects
  - Select a few projects to include in your portfolio. Each project should be on its own page with a title, start and completion dates, a description, and photos. In the description, include the objectives and the process. Always focus on the positive aspects of the project and emphasize your successes.
  - Photos are one of the most important features of a portfolio because they allow the reviewer to see the work you have done. Include at least one photo with each project and have the photo(s) fill about one-third of the page.

Professional Portfolio

How often should I update my portfolio?

Update your portfolio each semester or upon completion of a project. This will reduce the need for big updates and make the process less time-consuming. Additionally, the details of the project will be fresh on your mind, making them easier to recall.

It is very important to update your portfolio before submitting it with an application. You should tailor your portfolio to each job for which you are applying. Consider carefully which projects best relate to the position and include those projects in your tailored portfolio. Emphasize different aspects of your projects based on the experience you want to demonstrate to your potential employer.

How do I use my portfolio to get an internship or job?

Employers do not normally ask for portfolios; however, most will accept them. If you can submit multiple documents in an application, submit your resume and portfolio as two separate documents.

When you have an interview, come prepared with a printed copy of your portfolio, resume, and cover letter. Make your portfolio look professional by printing it in color and using a quality binding method. Use your portfolio during your interview to explain your work as you answer interview questions. Reference the photos as this will help the interviewers understand and visualize the scope and detail of your projects.

Writing Studio

The Writing Studio at Concordia University Irvine is a service dedicated to supporting all members of the campus community in their development as writers and critical thinkers. It provides synchronous and asynchronous consultations for undergraduate and graduate students working on writing assignments across the curriculum; *any course, any paper, any time*.

In addition to assisting writers, the Writing Studio offers course-specific and campus-wide workshops on various topics, along with writing resources for students and faculty that address a wide range of subjects.

Zoë Litzenberg
Director of the Writing Studio and Tutoring Services
zoe.litzenberg@cui.edu

Once you have completed your first draft of your resume and personal branding statement, make a Writing Studio appointment (https://www.cui.edu/studentlife/writing-studio/make-an-appointment) and allow them to provide you with feedback.

What were two pieces of feedback they provided you with?

What steps can you take to improve your resume or personal branding statement?

As you apply to on- and off-campus positions, bring your resume to the Career Studio. They can provide you with additional guidance to make your resume pop!

LinkedIn: Building Your Profile

LinkedIn is a professional networking platform that allows users to connect with peers, industry professionals, and organizations.

For engineering undergraduate students, LinkedIn offers:

- Opportunities to build a professional online presence.
- A platform to showcase skills, projects, and achievements.
- Tools to explore potential career paths.
- Networking with professionals in the engineering field.
- The ability to follow companies of interest and stay updated on their activities.
- Access to job and internship postings tailored to career goals.
- Learning modules and courses to develop new skills.
- Industry insights to stay informed about trends and innovations.
- Groups and forums for discussions with peers and experienced engineers.

To build your profile, you will need an **active email address** that you check regularly to register. The list below includes tips to help guide you through the profile creation process.

- **Photo:** Use a professional photo, and if possible, place yourself in a field-appropriate context.
- **Title:** Describe yourself and indicate if you are actively job hunting.
- **Summary:** This is your professional biography. Tell your story and what you are seeking in a short and concise way.
- **Experience:** Be thorough and include accomplishments that don't fit in the resume. Suggested connections will be made based on your past experiences and education.
- **Education:** List the college you attended, and include community college if appropriate.
- **Organizations:** Add activities, leadership groups, and clubs that you participated in during your college years.
- **Groups:** Join groups that match your brand. Participate in and post your own discussions to engage with others and build a presence.
- **Recommendations:** Request strong recommendations from your contacts. Aim for one per experience, preferably from direct supervisors.
- **URL:** Customize your auto-generated URL. Promote your profile by adding your URL to your signature line, business cards, and resume.

PRO TIP: You can include a link to your LinkedIn on your resume! Our Career Coaches will be happy to review your LinkedIn profile before attaching it to any resumes and job applications.

Internship Research

Internships are designed to provide structure and guidance for students entering a specific career field. These opportunities provide students with a space to apply their academic knowledge to the real-world, and allow them to learn the soft skills necessary to enter the job market upon graduation.

Research two internships that interest you. Use public job posting sites, such as LinkedIn & Indeed, to find information about each one.

Internship #1: _____

Employer Name & Location:

Dates for Internship:

Paid or Unpaid:

Qualifications:

Primary Responsibilities:

Internship #2: _____

Employer Name & Location:

Dates for Internship:

Paid or Unpaid:

Qualifications:

Primary Responsibilities:

Research Experience for Undergraduates Research

Not every student chooses to jump straight into a full-time job after graduation; many pursue additional education or research opportunities to deepen their expertise and expand their career options. One exciting path to consider is applying for a Research Experience for Undergraduates (REU), a prestigious and competitive program funded by the National Science Foundation. These programs are hosted at major universities and offer students the chance to conduct hands-on research over the summer (typically 8–12 weeks), with housing, travel, and a stipend often included. While REUs are not typically recommended for the summer after freshman year, they are an excellent option for students in their sophomore to senior years who are curious about research, considering graduate school, or simply want to explore their field more deeply.

REU #1: _____
University Name & Location:

Dates for REU:

Housing, Travel, or Stipend:

Qualifications:

Primary Responsibilities:

REU #2: _____
University Name & Location:

Dates for REU:

Housing, Travel, or Stipend:

Qualifications:

Primary Responsibilities:

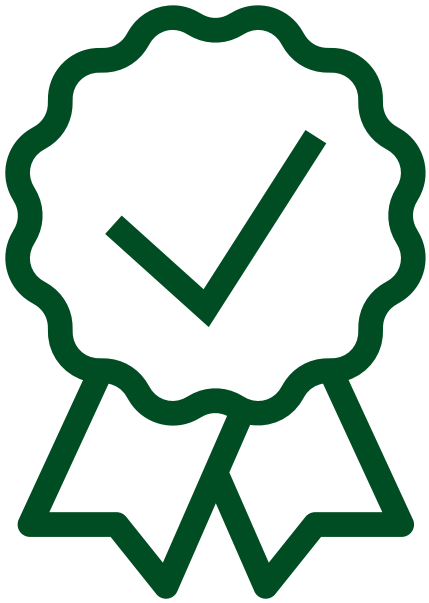
Licensing & Certifications

Certifications and licenses enhance your resume, demonstrate expertise, and improve job prospects. Many are available for undergraduate students to boost their credentials before graduation.

<u>Recommended Engineering Licenses</u>

- Fundamentals of Engineering (FE) Exam
  - Who? Final-year engineering students or recent graduates.
  - Why? First step toward becoming a Professional Engineer (PE).
  - Where to Learn More? NCEES.org

- Engineer-in-Training (EIT) Certification
  - Who? Those who pass the FE exam.
  - Why? Recognized designation before obtaining a PE license.
  - Where to Learn More? NSPE.org



<u>Recommended Certifications for Undergraduates</u>

- General Engineering Certifications
  - Certified Associate in Project Management (CAPM) – pmi.org
  - Lean Six Sigma (Yellow/Green Belt) – sixsigmacouncil.org
  - Mechanical & Manufacturing Engineering
  - SolidWorks Certified Associate (CSWA) – solidworks.com
  - Certified Manufacturing Engineer (CMfgE) – sme.org

- Electrical & Computer Engineering
  - Cisco Certified Network Associate (CCNA) – cisco.com
  - Certified LabVIEW Associate Developer (CLAD) – ni.com

- Civil & Environmental Engineering
  - LEED Green Associate – usgbc.org

- Software & Cloud Engineering
  - AWS Certified Cloud Practitioner – aws.amazon.com
  - CompTIA Security+ (Cybersecurity) – comptia.org

Industry Trends & Innovations

Engineering is constantly evolving with new technologies and innovations shaping various industries. Here are some of the most popular trends and innovations across different engineering fields in 2025:

1. Artificial Intelligence (AI) & Automation
- AI-driven predictive maintenance in manufacturing and infrastructure.
- AI-powered design tools (e.g., generative design in CAD software).
- Increased use of autonomous robots in construction and production lines.

2. Sustainable Engineering & Green Technologies
- Carbon capture and storage (CCS) to reduce emissions.
- Growth of green hydrogen as a clean energy source.
- Advancements in biodegradable materials for construction and packaging.

3. Smart Infrastructure & IoT (Internet of Things)
- Smart cities integrating IoT-based traffic management and energy-efficient buildings.
- Digital twins (virtual models) for real-time monitoring of infrastructure.
- Expansion of 5G and IoT sensors in industrial automation.

4. Advanced Manufacturing & Materials Science
- Growth of 3D printing (additive manufacturing) in aerospace, healthcare, and construction.
- Development of self-healing materials for aerospace and civil engineering.
- Nanotechnology applications in medicine, electronics, and materials engineering.

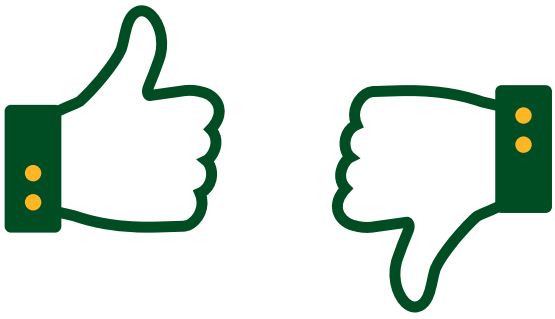
5. Electric Vehicles (EVs) & Renewable Energy
- Solid-state batteries increasing energy efficiency in EVs.
- Expansion of wireless charging for EVs and smart devices.
- Floating solar farms as an alternative renewable energy source.

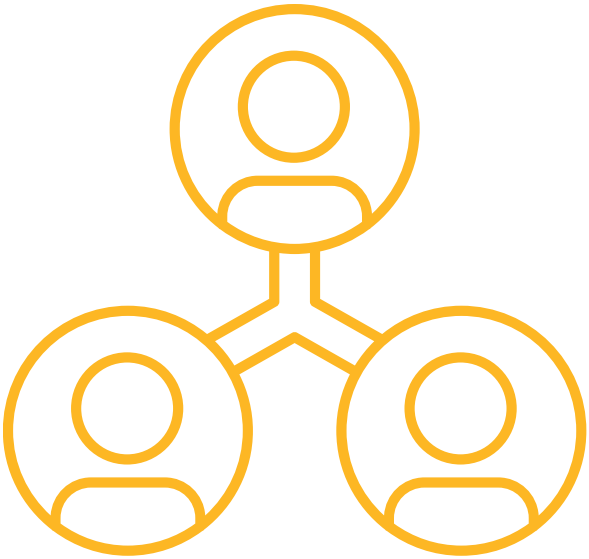
6. Space Engineering & Exploration
- Private sector advances in commercial space travel (e.g., SpaceX, Blue Origin).
- Lunar and Mars exploration initiatives using AI-driven robotics.
- Developments in space-based solar power to harness energy from space.

7. Medical Devices & Personalized Medicine
- Advancements in prosthetics with smart sensors and responsive control systems.
- Innovative cardiovascular devices such as stents, implants, and wearable monitors.
- Integration of AI in diagnostics and treatment planning for personalized medicine.

Fundamental Concepts

1. Taken a few 300 level courses.
2. Began to figure out what you like and dislike.
3. Started applying to internships.
4. Made a professional connection and followed up with them.





Guided Reflection Questions

Field Exploration & Mentorship Opportunities:
What steps have I taken to explore different fields within engineering, and have I identified potential mentors who can guide me in areas of interest?

Project Designing:
How have my recent projects helped me develop problem-solving and design skills, and how can I highlight these experiences in my professional profile?

Resumes & Personal Branding Statements:
Does my resume clearly reflect my skills, experiences, and career goals, and does my personal branding statement effectively communicate who I am as an aspiring engineer? How so?

LinkedIn Profiles:
Is my LinkedIn profile up to date with a professional photo, a compelling summary, and detailed descriptions of my projects, skills, and extracurricular activities? What can I incorporate?

Internship Research:
What specific industries, companies, or roles have I researched for internships, and how am I tailoring my applications to align with these opportunities?

Junior Year: Professional Development & Applied Learning

Goals:

- Refine skills in your chosen area of engineering and develop more specialized technical abilities.
- Gain practical experience through internships, co-ops, or research.
- Start building a professional portfolio of projects and experiences.

Focus Areas:

- Work on advanced projects, such as simulations, CAD designs, or lab experiments, that simulate real-world engineering problems.
- Experiment with more complex analysis or design tools related to your field, such as FEA (finite element analysis), advanced CAD, or control systems.
- Receive feedback on your projects through portfolio reviews or presentations to peers and professors.

Extracurricular Activities:

- Participate in engineering competitions (e.g., design competitions, hackathons) to gain exposure and practical experience.
- Attend networking events, conferences, and industry talks to connect with professionals in your field.

Recommended Courses: Please meet with your Academic Advisor to make sure you are taking your correct courses.

- ENGR 325
- ENGR 330
- ENG 320
- MTH 265
- MTH 384
- CSC 314
- ENGR 316*** (placeholder for Engineering “select 3 of these courses”)

Upcoming Competitions

Engineering competitions are a great way to showcase your technical skills that you've been developing in your major classes.

Concordia University Irvine: President's Academic Showcase
As a part of Concordia University's commitment to academic excellence, Concordia holds an annual President's Academic Showcase of Undergraduate Research. The competition is a chance for top students to work one-on-one with a faculty mentor on an undergraduate research project that the student chooses. Your faculty of choice does not necessarily have to be an Engineering professor, but a professor that can relate to the research you are conducting.

The competition is interdisciplinary, drawing entries from across the university in subjects such as art, music, science, philosophy, theology, business, economics, healthcare, counseling, education, and more. A panel of faculty, selected from across the disciplines, serves as judges for the showcase.

There are two levels of competition: Tier One for upperclassmen and Tier Two for freshmen and sophomores. Over $5000 in prizes are awarded, with a Tier One first-place prize of $1500.

There are three components to the competition: a research paper, an academic poster, and an oral presentation.

<u>Local Competitions</u>
Research 3 engineering competitions that you could participate in this academic year.

1.

2.

3.

Updating Professional Portfolio

When is the last time you updated your portfolio?

Take the time now to add new projects you've completed with well-lit, staged photos to compliment the fantastic work you've done.

See below for a refresher on what your portfolio should look like.

The layout of your portfolio should be simple and can include the following:

- Title page & Index (optional)
  - Always include a title page with your name, major, and contact information. Including a photo of yourself is optional. After the title page, you may choose to add an index.
- Personal introduction (optional) & Resume
  - You may also choose to have a personal introduction. If so, include anything you want a future employer to know and any information that may give you an advantage.
  - Make sure the resume in your portfolio is up-to-date and matches the resume you submitted with your application.
- Projects
  - Select a few projects to include in your portfolio. Each project should be on its own page with a title, start and completion dates, a description, and photos. In the description, include the objectives and the process. Always focus on the positive aspects of the project and emphasize your successes.
  - **Photos are one of the most important features of a portfolio** because they allow the reviewer to see the work you have done. Include at least one photo with each project and have the photo(s) fill about one-third of the page.

Summer Internships

NACE (National Association of Colleges and Employers) states that internships are an approach to soft-skill development. As an intern, you are not expected to have the soft skills or professionalism a full-time employee is expected to have; **an intern is expected to be willing to learn**!

In 2018, students who completed an internship received job offers more quickly than their counterparts who did not complete an internship. Students who completed an internship also had higher paying salaries than those who didn't.

A recent trend with employers is a conversion from internship to full-time positions upon graduation. Approximately **57.5% of internships were converted to full-time jobs** at the end of the internship term last year.

Summer Internships

Use Handshake, LinkedIn or Indeed to find two summer internship opportunities you can apply for.

Internship #1: _____

Employer Name & Location:

Dates for Internship:

Paid or Unpaid:

Qualifications:

Primary Responsibilities:

Internship #2: _____

Employer Name & Location:

Dates for Internship:

Paid or Unpaid:

Qualifications:

Primary Responsibilities:

Networking

Networking is one of the most effective techniques for career development and job-searches. Oftentimes, job descriptions don't provide the whole picture for what a job entails. Students who network can get the full story about the organization, available positions, and career-growth opportunities. Networking can help you create the ideal resume to give you an edge in your interview.

You use networking more than you realize. Selecting your classes and professors is a form of networking: reading the course catalogs, asking friends and acquaintances for recommendations, using "student only" sites for feedback on specific courses or professors, and talking to your Academic Advisor. Networking is essentially a combination of research, conversation, and analysis.

<u>Places to get started networking:</u>

- Social networking sites such as Handshake and LinkedIn
- Alumni networks and campus mentoring programs
- Career fairs, employer information sessions, and networking events
- Professional associations related to your field of interest
- Friends/family and their friends
- Community groups

Networking doesn't stop once you start your first full-time position. It can help you throughout your career. It is an ongoing process and a lifelong skill.

Networking

How to Network

The purpose of networking is to establish and maintain mutually-beneficial connections with people in your field of interest. It is the number one way to land a job!

Introduction Email

- Briefly explain what you have in common and describe what you hope to learn through your conversation.
- Be professional and check your spelling.

Sample Questions

- How did you choose this career field? (or get started in this job?)
- How did you prepare yourself for this profession?
- What can I do to best prepare myself?
- What do you like most/least about your job?
- What skills and/or personal qualities are necessary to succeed in this career?
- What do you do in a typical day?
- What are the major goals your organization tries to accomplish?
- Are you a member of any professional associations that you have found useful?
- Who else do you know that I might talk with about this career field? May I use your name in contacting this person?

Make a Positive Impression

- Dress in a professional manner.
- Keep the conversation brief and to the point.
- Do not ask general questions about information you can easily find on the internet.
- Always maintain eye contact, smile, and nod occasionally to indicate your interest in what they are saying.
- Feel free to answer questions about yourself, or to intersperse some information about yourself.
- Thank the person for his/her time. Write a thank you note describing what was of value to you.

Networking

Quick Tips for Networking

1. Make networking part of your daily activities
    a. When parents/family/friends ask you about post-graduation plans, share details about your plans!
    b. Ask them if they know of anyone in the field you're interested in, ask them to connect you with them, and follow through.
2. Talk to your career counselor
    a. Unsure about your intended career path? Not sure what questions to ask?
    b. They can help you refine your interests and goals, and formulate a good response.
3. Make the most of your networking
    a. Research the industry, organization, and person you will be meeting prior to your conversation.
    b. Make a list of questions to ask; if you are starting with a sample list of questions obtained from your career center or online, customize the questions to be specific to the industry and the person you will be contacting.
4. Be respectful
    a. Treat professionals with respect. Use appropriate grammar and spelling when writing messages. If you've scheduled a meeting, don't cancel. Arrive 15 minutes early.
    b. Whether your conversation is in person, on the phone, or via e-mail, follow up with a thank-you note to show your appreciation and improve your chances of creating a productive relationship.
5. Stay positive!
    a. Not everyone you meet will be immediately helpful. Still show respect and continue networking.
    b. None of us can predict which connections will lead to meaningful outcomes, so use care to nurture your connections. Accept networking as an investment in your future that can produce results in the present.

Networking

Network Inventory

Consider your network for the below questions.

How large would you rate your network on a scale of 1-10?

1 2 3 4 5 6 7 8 9 10

How relevant is your network to what you would like to pursue?

Not relevant Somewhat relevant Relevant

Are you connected on LinkedIn?

Yes No

Goal:
Meet 2-3 new people from your industry to practice networking

Have you started putting “feelers” out into your network for potential internships/full-time positions?

Yes No

What is your personal branding statement when introducing yourself to new people? (Update from Personal Branding Statement last year).

LinkedIn: Networking

LinkedIn is a networking tool that many college students as well as people well into their careers utilize for talent acquisition and job searching. When networking, it's important to remember that everyone could potentially help you get to where you want to be professionally.

Connect
Connect with family, friends, professors, Career Development staff, bosses, coaches - literally everyone you know! Always send requests with a personalized note.

Personalized Requests
Write personalized connection requests by checking their contact settings first and indicate why you want to connect with them.

Address Book
Upload your address book from your email accounts, but make sure to connect only with people you know.

Join Groups
Join alumni, university, or other industry groups and participate in the groups to expand your network.

Look Up People
Look up people you meet in person and connect with them.

Request
Request introductions to people you do not know but someone in your network is connected to. Indicate why you want to connect. You will need to write to your connection requesting that they introduce you.
***Do not ask for a job in the introduction.*

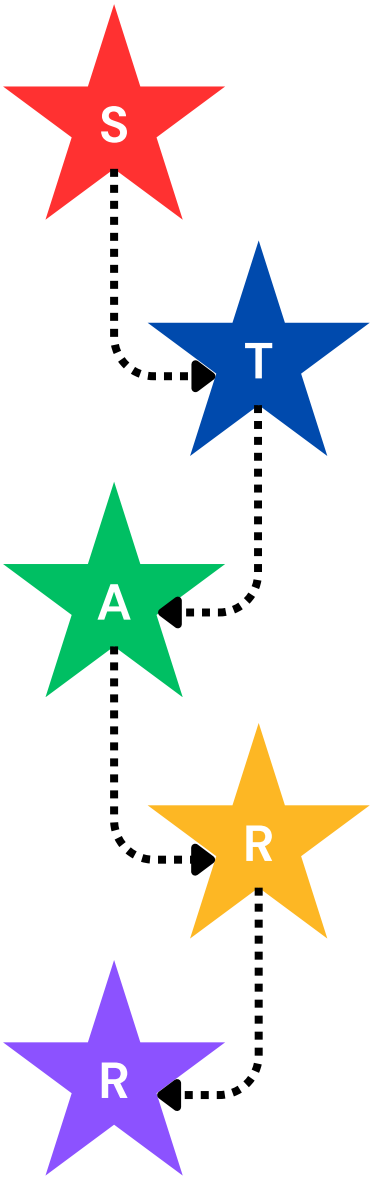
Maintain
Maintain your network by thanking them for their help and keep them up to date.

Interview Preparation: STARR Method

The purpose of interview preparation is to develop the ability to articulate your experience in a way that is meaningful to the employer. You are essentially telling your story, which includes your past experiences, passions related to your field, and unique qualities you will bring to the role.

Interviewers will all ask you different variations of questions that highlight your:

- Self-awareness
- Communication
- Digital Fluency
- Teamwork & Interpersonal
- Leadership
- Professionalism & Work Ethic
- Problem Solving & Creativity
- Global Perspective



When answering these interview questions, utilize the STARR method.
Situation: What is the context and background?
Task: What was the ask or the assignment in question?
Action: How did you respond to the situation?
Result: What happened because of your actions?
Reflection: Why does it apply to the role you're applying for?

Interview Preparation: STARR Method

Take a look at a few example questions and answers below:

Describe a situation where you had to demonstrate strong teamwork skills:

Last year, I worked on a group project for a mechanical engineering design course. Our task was to develop a small-scale wind turbine prototype that could efficiently generate power. The team consisted of five members, each assigned to specific roles like design, simulation, fabrication, and testing. Early in the project, we realized there were gaps in communication, which caused delays and misalignment between the design and fabrication phases.

As one of the team members responsible for the design phase, I realized that better teamwork and coordination were essential for us to meet our project deadlines and deliver a cohesive prototype.

I suggested we set up weekly progress meetings where each member could share updates and discuss challenges. I also created a shared document where we tracked tasks, deadlines, and dependencies, ensuring everyone stayed on the same page. To further enhance collaboration, I volunteered to help the fabrication team understand design specifications, so they could align their processes with the intended prototype.

The improved communication and task tracking allowed us to address issues early and streamline our work. We completed the prototype on time and received top marks for our project.

This experience taught me the value of proactive communication and teamwork, which I am eager to bring to an internship setting.

Interview Preparation: STARR Method

What steps do you take before making a decision on how to solve a problem and why?

During a group project for my electrical engineering class, we were tasked with designing a circuit for an automated lighting system. Midway through the project, we realized the circuit was overheating under prolonged use. We needed to decide quickly how to address the issue while ensuring we stayed on track with the project timeline.

As one of the team members responsible for circuit design, it was up to me to identify the root cause of the problem and propose a solution. I wanted to ensure my approach was both effective and feasible within our constraints.

To make an informed decision, I followed a systematic approach of first understanding the problem, researching and analyzing options, collaborating with the team, and lastly testing the solution. I first reviewed the circuit design to identify areas where excessive heat was being generated. I also consulted my teammates to gather their observations during testing. Then, I explored possible solutions, such as using different materials, adding heat sinks, or optimizing the circuit layout. I evaluated these options based on factors like cost, ease of implementation, and their impact on performance. Next, I presented my findings to the team and discussed the pros and cons of each solution. Together, we agreed to redesign a specific component to reduce resistance, which was causing the overheating. After implementing the changes, we ran additional tests to confirm that the overheating issue was resolved without introducing new problems.

The revised circuit performed as expected, and we successfully completed the project on time.

This experience reinforced the importance of gathering data, considering multiple perspectives, and testing solutions before finalizing decisions. It's a process I continue to use because it ensures my decisions are well-informed and practical.

Interview Preparation: STARR Method

Let's Practice STARR: Use what we just learned to create your own answers to the following questions.

What motivates you?

Situation:

Task:

Action:

Result:

Reflection:

Interview Preparation: STARR Method

How do you handle stress and pressure?

Situation:

Task:

Action:

Result:

Reflection:

Interview Preparation: STARR Method

How do you respond to criticism?

Situation:

Task:

Action:

Result:

Reflection:

Interview Preparation: Interviewer Questions

Asking questions during an interview can set you apart from other candidates. This shows that you've taken an interest in the company you're applying to and their values, shows that you're prepared and serious about the role, and it helps you decide whether or not the job is a good fit for you and your career goals.

Here is a list of sample questions to ask an interviewer:

- What does a typical day/week look like in this position?
- What are the next steps in the hiring process?
- What are the key positions and groups that I would be work with?
- What is the single largest problem facing your team today?
- What's your company culture like?
- What type of training or educational advancement does your organization offer?
- What have been the top accomplishments of the organization over the past year?
- What does success look like in this position, and how do you measure it?

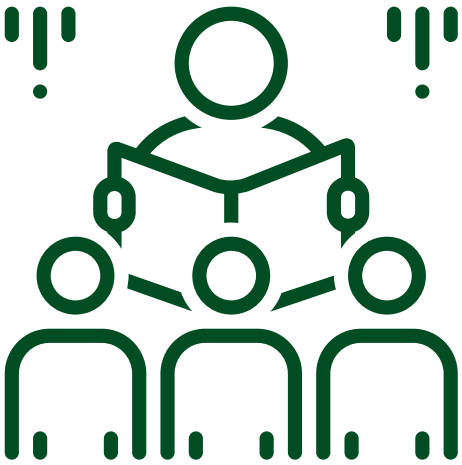
What are two additional questions you can ask a potential employer?

1.

2.

Fundamental Concepts

1. Brainstormed about Capstone Project.
2. Gained real world experience.
3. Learned to talk about projects from a storyteller’s perspective.
4. Utilized Hiration for a mock interview.



Guided Reflection Questions

Competitions & Portfolio Development:
Which upcoming competition(s) align best with your current skills or interests, and how can participating help strengthen your professional portfolio?

Internship Readiness & Experience Highlighting:
How are you preparing now to stand out in summer internship applications, and what specific experiences or projects can you highlight?

Networking & LinkedIn Engagement:
What steps have you taken to build meaningful connections in the engineering field, both in-person and on LinkedIn, and how might these connections support your career goals?

Interview Preparation & Storytelling (STARR Method):
Thinking about the STARR method and common interviewer questions, how confident do you feel in sharing your story during interviews, and what areas could you practice more?

Senior Year: Professional Transition

Goals:

- Finalize a strong portfolio of engineering projects aligned with your career goals.
- Gain real-world experience by continuing your internship, research, or co-op work.
- Prepare for job applications, interviews, and potential graduate school applications.
- Research different routes post-graduation: MEng, MS, PhD, full-time job, internship, etc.

Focus Areas:

- Complete a capstone or senior design project that integrates all learned skills, demonstrating technical expertise.
- Refine your resume, portfolio, and LinkedIn profile in preparation for job applications.
- Attend career fairs, portfolio reviews, and mock interviews to connect with potential employers and receive feedback.

Extracurricular Activities:

- Apply for engineering roles, internships or grad school in preparation for post-graduation.
- Attend industry networking events or seminars to showcase your work and learn about job opportunities.

Recommended Courses: Please meet with your Academic Advisor to make sure you are taking your correct courses.

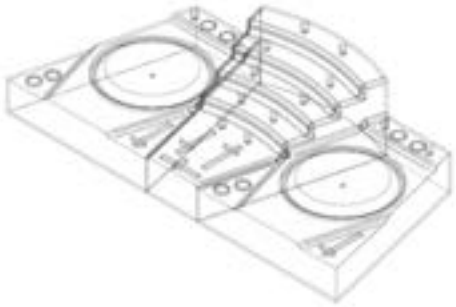
- ENGR 318*** (placeholder for Engineering “select 3 of these courses”)
- ENGR 495
- ENGR 496
- PHY 325

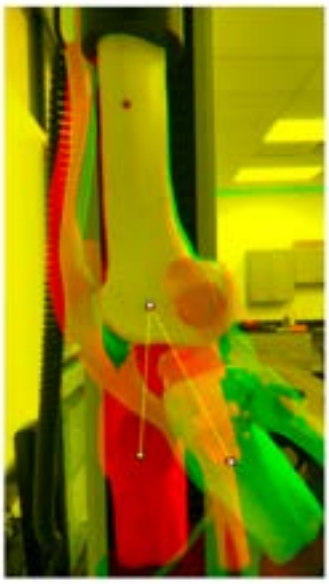
Capstone Project

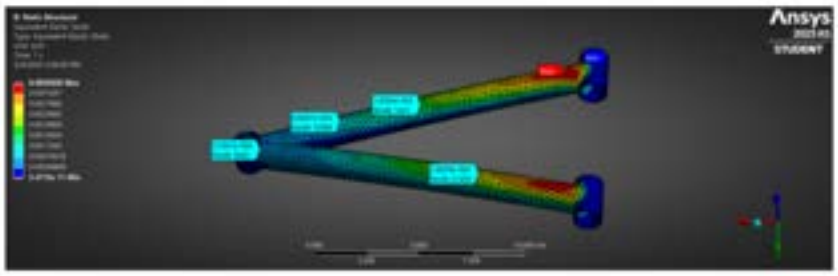
ENGR 495 & 496: Senior Capstone I & II
Students engage the knowledge content of their academic discipline in the context of a specific technology problem or need and in collaboration with a partner organization or client community. Teams demonstrate effective project management strategies, report on progress consistently, and document significant design activity.

<u>Past Capstone Projects:</u>

- Front and Rear Suspension of a Baja SAE Vehicle: Complete suspension system for CUI's first-ever off-road Baja vehicle.
- ACL Prevention Cleat Testing System: Soccer cleat testing system to determine ACL injury risk.
- Low Cost Collision Detection System for Aircrafts: GPS-tracking software for aircrafts housed in a small, low-cost unit.
- SensoryMix DJ System: Specialized DJ system for the visually impaired community.
- The Spectral Imaging and Geophysical Mapping of Asteroid (SIGMA) Mission: Space-suitable vehicle for the study of near Earth objects.







Polished Portfolio & Resume

An outline for your portfolio can be found under “Professional Portfolio” under Junior Year.

The criteria for a strong portfolio:

- Shows your most relevant work
- Includes projects that cover diverse technical skills
- Crafts a story of you as a capable and experienced candidate
- Can be quickly parsed. Content is layed out cleanly, logically, and consistently
- Includes your name and contact information

For each project, a strong portfolio:

- Describes the objective of the design project
- Provides visuals that illustrate and support your technical work
- Explains your specific technical contribution to the project
- Provides just enough technical detail to orient the reader to the project
- Describes the results of the design, and evaluates how well it met the initial objective

<u>PDF or website?</u>

Benefits of PDF

- You can create a PDF with PowerPoint (or Keynote, Adobe Illustrator), so you don’t necessarily need to learn a new platform
- You can rearrange or include/exclude pages to give a tailored portfolio to each recipient
- You can bring a hard copy to an interview or career fair

Benefits of website

- You can include videos or GIFs to show dynamic projects
- Templates make it easy to have a clean, graphically appealing layout
- You can update your content even after you’ve sent your portfolio to the recipient
- A link to a portfolio can be included in a CV/resume even if a portfolio is not specifically requested as a part of an application package

Introduction to NACE

The **National Association of Colleges and Employers (NACE)** is a leading organization that connects higher education institutions with employers to support student career development. NACE provides valuable resources, including job market trends, salary data, and professional competencies essential for career success.

Why is NACE Important for Engineering Students?

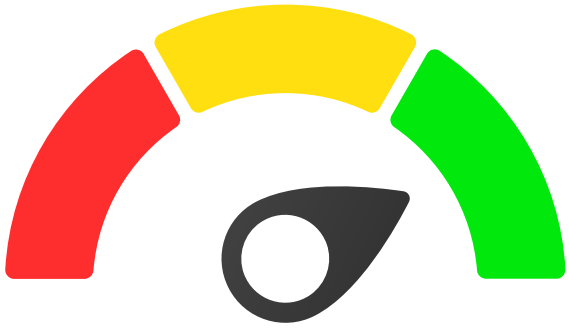
As an engineering undergraduate, understanding NACE's career readiness competencies can help you bridge the gap between academic learning and workplace expectations. Employers seek engineers who are not only technically proficient but also possess professional skills that contribute to workplace success.

Leveraging NACE for Your Engineering Career

- Visit **www.naceweb.org** for career insights and resources.
- Connect with the Center for Career and Vocation to explore engineering career development opportunities.
- Seek internships and networking opportunities aligned with NACE competencies.

By actively developing these competencies, you'll be better prepared for a successful engineering career.

NACE®
National Association of Colleges and Employers



Introduction to NACE

NACE Career Readiness Competencies & Engineering Applications

Below are key NACE competencies and how they relate to engineering careers:

1. Critical Thinking & Problem-Solving
    a. Engineers analyze data, troubleshoot systems, and design solutions for complex problems.
2. Communication
    a. Engineers must explain technical concepts to diverse audiences, write reports, and present findings effectively.
3. Teamwork & Collaboration
    a. Engineering projects often involve working in multidisciplinary teams to achieve project goals.
4. Professionalism & Work Ethic
    a. Engineers must be accountable, manage time efficiently, and adhere to ethical standards.
5. Technology & Data Literacy
    a. Engineers work with advanced software, simulations, and data analysis tools in various industries.
6. Career & Self-Development
    a. Engineers should seek internships, professional certifications, and networking opportunities to stay competitive.
7. Equity & Inclusion
    a. Engineers create inclusive designs that consider diverse populations and ethical impacts.
8. Leadership
    a. Engineers in leadership roles guide projects, mentor team members, and drive innovation.

Introduction to NACE

Mapping NACE Competencies to Your Engineering Field

Use the table below to reflect on how these competencies apply to your engineering major and future career. Fill in the blanks with examples based on your coursework, projects, or internships.

NACE Competency	How It Relates to My Engineering Major	Example from Coursework or Experience
Critical Thinking & Problem-Solving		
Communication		
Teamwork & Collaboration		
Professionalism & Work Ethic		
Technology & Data Literacy		
Career & Self-Development		
Equity & Inclusion		
Leadership		

LinkedIn: Job Search

Utilizing LinkedIn's job search feature can show you all job possibilities within your industry and your filters.

Job Position
Determine what kind of position you want by viewing LinkedIn profiles.

Jobs Tab
Once you know, click the jobs tab and enter the term to search for jobs advertised on LinkedIn. It will also suggest jobs that match your skills and interests.

Follow
Search and follow companies of interest by checking for new openings and seeing the trends and charts. See where people worked before and after those companies -- to get more prospects.

Apply
Apply through LinkedIn. Your profile will be attached to your application.

Research
Do your homework before an interview. Research the company and people interviewing you on LinkedIn. This will give you an edge over those less prepared.

Graduate School

Concordia has a proud legacy of placing our graduates in top-rated graduate schools and first-class Ph.D. programs. A few examples of the types of fields that graduates with a degree in Engineering are qualified for further study include:

- Architectural and design companies
- Electrical engineering
- Biomedical engineering
- Chemical engineering
- Civil engineering
- Computer engineering
- Computing
- Control engineering
- Energy
- Mechanical engineering
- Mobile technologies
- Sensor and data processing
- Telecommunications
- Transport and utilities companies

Each graduate program will have their own requirements for application, but they will likely require a resume. We recommend that you only apply to 2-3 programs.

Important Information to Include on a Resume for Graduate School:

- Begin with your name at the top
- List Education (Undergraduate and Associate Degree)
- Include your GPA
- Highlight educational accomplishments and projects
    - Include project title, objective, context, contribution, and impact
- Share relevant internship or volunteer experience
- List awards or honors received
- Share relevant work experience
- Education Section:
    - Include name of university or college location (City and state)
        - Ex. Concordia University Irvine - Irvine, CA
    - Graduation date (month and year)
        - Ex. Anticipated Graduation Date: May 2026
    - List out the degree you are earning
        - Ex. Bachelors of Arts in Engineering with a Minor in Graphic Design

Graduate School

Isolde Mcdowell
isolde@mcdowell.com | (789) 012-3456 | linkedin.com/in/isolde-mcdowell | @isolde.mcdowell

Highly motivated Engineering Student with a strong passion for sustainable design and innovation. Proven ability to develop and implement cutting-edge solutions, resulting in significant cost reductions and improved energy efficiency. Collaborative team player with excellent problem-solving skills and a track record of delivering projects on time and within budget.

EDUCATION
Concordia University Irvine, Irvine CA | May 2024
Bachelor of Science in Engineering | GPA 3.8

WORK EXPERIENCE
Engineering Student 01/2024 – Present
EcoTech Innovations, Seattle, WA

- Led a cross-functional team to design and implement a new automated testing framework, reducing testing time by 40% and improving product release cycles by 25%.
- Developed and integrated a machine learning algorithm into existing systems, enhancing predictive maintenance capabilities and decreasing equipment downtime by 30%.
- Managed a project budget of $500,000, optimizing resource allocation and achieving a 15% cost saving through strategic vendor negotiations and process improvements.

Junior Engineer 06/2020 – 12/2021
Momentum Marketing Group, Miami, FL

- Assisted in the development of a real-time data analytics tool, enhancing data processing speed by 50% and supporting data-driven decision-making across departments.
- Participated in a cross-departmental initiative to streamline production processes, achieving a 15% increase in manufacturing efficiency and reducing waste by 10%.
- Contributed to the successful launch of a new product line by conducting rigorous testing and quality assurance, ensuring compliance with industry standards and regulations.

SKILLS & COMPETENCIES

Hard Skills

- Energy Efficiency Improvement
- Structural Integrity Assessment
- Water Purification Technology
- Prototype Design and Development
- Safety Regulations and Standards Implementation
- Renewable Energy Systems

Soft Skills

- Communication Skills
- Time Management
- Critical Thinking
- Attention to Detail
- Adaptability
- Team Collaboration

CERTIFICATIONS
Certified Systems Engineering Professional (CSEP)
07/2022
International Council on Systems Engineering (INCOSE)
Project Management Professional (PMP)
07/2021
Project Management Institute

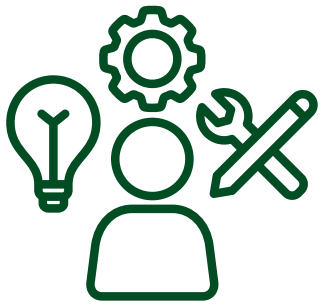
AWARDS
1st Place in Concordia University Irvine's 2023 President's Academic Showcase of Undergraduate Research
Topic: Energy Harvesting from Vibrations

Graduate School

Top Skills & Keywords for Engineering Resumes

Hard Skills

- CAD software proficiency
- Technical drawing and drafting
- Computer programming (e.g. Python, C++, Java)
- Data analysis and interpretation
- Problem-solving and troubleshooting
- Knowledge of engineering principles and concepts
- Familiarity with engineering software and tools
- Technical documentation and report writing
- Quality control and assurance
- Project management skills
- Research and development
- Strong mathematical and analytical skills



Soft Skills

- Technical Proficiency
- Analytical Thinking
- Problem Solving
- Attention to Detail
- Teamwork and Collaboration
- Communication Skills
- Time Management
- Adaptability
- Initiative
- Self-Motification
- Learning Agility
- Professionalism

Resume Action Verbs for Engineering Interns

- Analyzed
- Assembled
- Assisted
- Collaborated
- Designed
- Developed
- Documented
- Evaluated
- Implemented
- Innovated
- Maintained
- Modified
- Optimized
- Programmed
- Researched
- Supported
- Tested
- Troubleshooted

Entry Level Positions

If your plan is to join the workforce in an area of national need, you will be prepared to succeed as a leader, professional, responsible citizen, and lifelong learner. A few examples of the types of fields that graduates with a degree in Engineering are qualified for a career include:

- Architectural and design companies
- Electrical engineering
- Biomedical engineering
- Chemical engineering
- Civil engineering*
- Computer engineering
- Computing
- Control engineering
- Energy
- Mechanical engineering
- Mobile technologies
- Sensor and data processing
- Telecommunications
- Transport and utilities companies

*Civil engineering careers typically require an EIT

Each job application will have their own requirements for application, but they will require a resume. We recommend that you create curated resumes tailored to each position you are applying for. *DO NOT USE ONE RESUME FOR ALL APPLICATIONS.*

Important Information to Include on a Resume for Job Applications:

- Resume should begin with your name, contact information, email address and phone number.
- Your name should be very visible at the top, bolded and in a larger font than the rest of the document.
- After contact info you have the option to to include a resume summary or objective statement.
    - An objective statement explains your career goals and is a good choice for those limited with professional work experience.
    - A resume summary is a short statement used to describe your relevant work experience and skills.
- List skills that fit with the job you are applying to.
- Use key words that stand out, are relevant to the employer, and will prove success.
- List professional history starting with your most recent job.
- Do not include GPA for an employer resume.

Entry Level Positions

Albin Vega

albin@vega.com |(890) 123-4567 | linkedin.com/in/albin-vega | @albin.vega

Results-oriented Engineering Intern with a strong passion for problem-solving and a drive for continuous improvement. Proven ability to contribute to the design and development of engineering projects, resulting in significant efficiency gains and cost savings. Collaborative team player with excellent research and analysis skills, dedicated to optimizing manufacturing processes and ensuring the reliability of engineering systems.

EDUCATION

Concordia University Irvine, Irvine CA | Expected Graduation May 2025
Bachelor of Science in Engineering

WORK EXPERIENCE

Engineering Intern 04/2024 – Present
Apex Engineering Solutions, Carlsbad, CA

- Led a cross-functional team to design and implement a new automated testing framework, reducing testing time by 40% and improving product reliability.
- Developed a predictive maintenance algorithm using machine learning, resulting in a 25% reduction in equipment downtime and saving $50,000 annually.
- Collaborated with senior engineers to optimize a manufacturing process, increasing production efficiency by 15% and decreasing waste by 10%.

Engineering Assistant 10/2023 – 03/2024
TechPro Engineering, Madison, TN

- Coordinated a project to upgrade legacy systems to cloud-based solutions, enhancing data accessibility and reducing operational costs by 20%.
- Conducted a comprehensive analysis of system performance, identifying bottlenecks and implementing solutions that improved processing speed by 30%.
- Assisted in the development of a new product feature, contributing to a 10% increase in customer satisfaction and a 5% rise in sales.

Engineering Analyst 05/2023 – 09/2023
TechPro Engineering, Madison, TN

- Supported the engineering team in the design and testing of a new component, achieving a 95% success rate in initial trials.
- Implemented a data collection system for quality control, improving defect detection rates by 15% and enhancing overall product quality.
- Participated in weekly project meetings, providing insights that led to a 10% improvement in project timelines and resource allocation.

SKILLS & COMPETENCIES

Hard Skills

- Proficiency in Computer-Aided Design (CAD) software
- Knowledge of engineering principles and theories
- Experience with engineering simulations and modeling
- Knowledge of system performance improvement techniques

Soft Skills

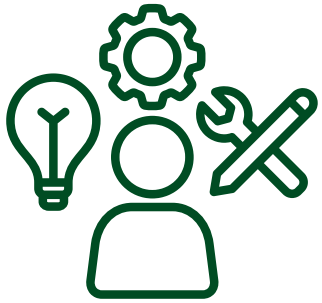
- Strong analytical and problem-solving skills
- Ability to collaborate with cross-functional teams
- Attention to detail and accuracy in design and specifications
- Ability to handle multiple tasks and projects simultaneously

Entry Level Positions

Top Skills & Keywords for Engineering Resumes

Hard Skills

- CAD software proficiency
- Technical drawing and drafting
- Computer programming (e.g. Python, C++, Java)
- Data analysis and interpretation
- Problem-solving and troubleshooting
- Knowledge of engineering principles and concepts
- Familiarity with engineering software and tools
- Technical documentation and report writing
- Quality control and assurance
- Project management skills
- Research and development
- Strong mathematical and analytical skills



Soft Skills

- Technical Proficiency
- Analytical Thinking
- Problem Solving
- Attention to Detail
- Teamwork and Collaboration
- Communication Skills
- Time Management
- Adaptability
- Initiative
- Self-Motification
- Learning Agility
- Professionalism

Resume Action Verbs for Engineering Interns

- Analyzed
- Assembled
- Assisted
- Collaborated
- Designed
- Developed
- Documented
- Evaluated
- Implemented
- Innovated
- Maintained
- Modified
- Optimized
- Programmed
- Researched
- Supported
- Tested
- Troubleshooted

Negotiating Offers

1. Review the Offer Thoroughly

For Full-Time Positions:

- Base Salary?
- Start Date?
- Benefits?
- Location? (Is it remote?)
- Expenses Covered?
- 401k / Retirement Options
- Contact Information?
- Deadline to Accept Offer?

For Internships:

- Base Salary (if applicable)?
- Start and End Dates?
- Location? (Is it remote?)
- Expenses Covered?
- Housing Assistance?
- Contact Information?
- Deadline to Accept Offer?

2. Evaluate the Offer

For Full-Time Positions:

- Company Culture: Is it a good fit for you?
- Professional Development Opportunities: Are they available?
- Salary Satisfaction: Does it meet your expectations?
- Alignment with Your Plans: Does the start date work for you?
- Location & Commute: Is it manageable?

For Internships:

- Company Culture: Is it a good fit for you?
- Career Alignment: Is this opportunity aligned with your goals?
- Experience & Training: What will you gain?
- Monthly Expenses: Does the salary cover your needs?

3. Respond to the Offer

- Send a Thank-You Email: Express your appreciation for the offer.
- Ask for Clarifications: If anything is unclear or missing, ask.
- Communicate Your Timeline: Let them know when you plan to respond.
- Request an Extension: If you need more time, politely ask.

Negotiating Offers

4. Negotiate the Offer

- Research: Look into industry standards for salary and benefits for similar positions.
- Cost of Living: Compare your anticipated take-home pay with living expenses.
- Benefits Value: Remember, benefits can account for up to 40% of your paycheck!

5. Negotiation Tips:

- Schedule a Phone Call: It's often more effective to negotiate over the phone.
- Express Your Requests: Clearly state what you would like to negotiate.
- Consider Alternatives: If salary is non-negotiable, ask about vacation days, bonuses, or relocation assistance.
- Show Gratitude: Thank your hiring manager for their time at the end of the call.

6. Accepting the Offer:

- Send a Thank You Email: Express your gratitude.
- Confirm Details: Clearly state your:
  - Start Date
  - Position
  - Salary
  - Location
  - Any other important information

7. Declining the Offer:

- Express Gratitude
- Thank them for the opportunity and their time
- Be Professional
- State your decision respectfully

Negotiating Offers

Final Tips:

- **Stay Respectful:** Always approach discussions with kindness.
- **Negotiate with Confidence:** Employers expect negotiation, so advocate for yourself!
- **Be Prepared for Various Responses:** Negotiation outcomes can vary.
- **Act Quickly:** Once you receive a response from your negotiation, make your decision promptly.
- **Be Patient:** Know your worth, stay humble, and understand that growth takes time.
- **Stay Positive:** New beginnings and transitions can be difficult, but be prepared to work hard.

Areas to focus on during your first full-time position or internship:

1. Be Ready to Work Hard: Entry-level roles can involve a lot of hands-on tasks that may seem minor or repetitive, but they are essential building blocks. Completing these tasks well not only hones your skills but also shows reliability and a positive work ethic. Remember, the time and effort you invest now will set you up for growth in the future.

2. Recognize that Growth Takes Time: In any transition, it's natural to feel the urge to progress quickly, but true growth is a process. By being consistent, reliable, and open to learning, you'll develop a reputation for professionalism and commitment. This reputation becomes a foundation for further opportunities and advancement.

3. Embrace Feedback and Learn from Challenges: In a new role, you're bound to encounter feedback, and possibly even mistakes. Each of these moments is an opportunity to learn and adapt. Staying humble and open to guidance shows that you're dedicated to developing your skills and are willing to adapt to the team's needs.

4. Build Relationships and a Support Network: Seek out mentors and colleagues who can guide you through this transition. Don't hesitate to ask questions or seek advice from those who have been in your position before. Building these connections can make the transition smoother and provide you with a support system to rely on.

Fundamental Concepts

1. Take time to think back on everything you've done! Not only will it help you prepare for interviews, but you'll realize that you really have grown a lot since freshman year.
2. Be selective, but flexible when considering future options. What is non-negotiable for you? How can you compromise to get your foot in the door?
3. Stay connected with your Concordia network. Make sure you have contact information for your classmates or connect with them via LinkedIn.

Guided Reflection Questions

Capstone Project & Career Alignment:
How does your current capstone project reflect the kind of work you want to pursue after graduation, and how might you communicate its value to future employers or graduate programs?

Professional Materials & Career Readiness:
In what ways have you refined your portfolio and resume to reflect your most relevant skills and experiences, and how do these materials support your goals for entry-level roles or graduate school?

Career Exploration & Job Search Tools:
How has your understanding of the NACE career competencies or LinkedIn job search tools influenced the way you are preparing for the workforce or identifying potential opportunities?

Post-Graduation Planning & Decision-Making:
Have you scheduled the FE Exam? Have you completed you First Destination Survey through Handshake? As you consider graduate school, entry-level jobs, or negotiating offers, what factors are most important to you in making an informed and confident decision about your next step?